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User's Guide to MOBILE3
(Mobile Source Emissions Model)

(U.S.) Environmental Protection Agency
Ann Arbor, MI

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USER'S GUIDE

to

MOBILE3

(MOBILE SOURCE EMISSIONS MODEL)

JUNE 1984

U.S. ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF MOBILE SOURCES
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16. ABSTRACT

This document is the User's Guide To MOBILE3. MOBILE3 is a computer program that calculates emission factors for hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NOx) from highway motor vehicles. The program uses the calculation procedures and emission factors presented in Compilation of Air Pollutant Emission Factors: Highway Sources, July 1984 (EPA 460/3-84-005). MOBILE3 calculates emission factors for eight individual vehicle types in two regions of the country. MOBILE3 emission estimates depend on various ambient, vehicle usage, and local conditions such as temperature, speed, mileage accumulation and accrual distributions, vehicle-miles-traveled distributions, etc. MOBILE3 will estimate emission factors for any calendar year between 1970 and 2020, inclusive. The 20 most recent model years are considered in operation in each calendar year. MOBILE3 supercedes MOBILE2. Compared to MOBILE2, MOBILE3 incorporates several new options, calculating methodologies, emission factor estimates, emission control regulations, and internal program designs.

As such, MOBILE3 should be easier to maintain, transport, alter and comprehend.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS		b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
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Exhaust Emissions	Regulations	Mobile Source Emissions model	
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DISCLAIMER

Within this final MOBILE3 User's Guide, there are references to a new AP-42 document, Compilation of Air Pollutant Emission Factors: Highway Mobile Sources, August 1984 (EPA 460/3-84-005). This AP-42 document along with further background documentation describing how the MOBILE3 emission factors were derived were not available at the time this manual was released. Once these emission factor documents are available, they will be distributed to the EPA Regional Offices. Copies will be available through the National Technical Information Service in Springfield, Virginia.

Additionally, EPA will not be responsible for the accuracy of MOBILE3 tapes that were received from sources other than EPA in Ann Arbor or NTIS, or for the accuracy of draft MOBILE3 tapes that were released prior to the final MOBILE3 tapes. Further, EPA will not be responsible for the accuracy of MOBILE3 when modified by the user.

ABSTRACT

This document is the USER'S GUIDE to MOBILE3. MOBILE3 is a computer program that calculates emission factors for hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NOx) from highway motor vehicles. The program uses the calculation procedures and emission factors presented in Compilation of Air Pollutant Emission Factors: Highway Mobile Sources, August 1984 (EPA 460/3-84-005). MOBILE3 calculates emission factors for eight individual vehicle types in two regions of the country. MOBILE3 emission estimates depend on various conditions such as ambient temperature, speed, and mileage accrual rates. MOBILE3 will estimate emission factors for any calendar year between 1960 and 2020, inclusive. The 20 most recent model years are considered in operation in each calendar year. MOBILE3 supercedes MOBILE2. Compared to MOBILE2, MOBILE3 incorporates several new options, calculating methodologies, emission factor estimates, emission control regulations, and internal program designs.

Requests for copies of MOBILE3 and for additional copies of this User's Guide, should be directed to the following:

The National Technical Information Service (NTIS).
U. S. Department of Commerce
Springfield, Virginia 22161
(703) 557-4650

Questions concerning MOBILE3 or this User's Guide should be directed to the following:

Office of Mobile Sources
Emission Control Technology Division
Test and Evaluation Branch
2565 Plymouth Road
Ann Arbor, MI 48105
Attn: MOBILE3
Telephone: (313) 668-4473

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Chapter 1
GENERAL DESCRIPTION OF MOBILE3

1.0 INTRODUCTION

MOBILE3 is an integrated set of FORTRAN routines for use in the analysis of the air pollution impact of highway mobile sources. The system has been designed to provide the user with a flexible yet easy to use analytical tool which can be applied in a wide variety of air quality planning functions. MOBILE3 is an update of its predecessors MOBILE1 and MOBILE2.

This chapter explains the primary technical differences between MOBILE3 and MOBILE2. Instructions on how to use the program are contained in Chapter 2 (MOBILE3 Inputs), Chapter 3 (MOBILE3 Outputs), Chapter 4 (MOBILE3 Implementation), and Chapter 5 (MOBILE3 Examples). This manual also has four appendices: Appendix A (Structure Chart), Appendix B (Module Dictionary), Appendix C (MOBILE3 Source Listing) and Appendix D (Anti-Tampering Program Credit Matrices).

This User's Guide to MOBILE3 does not duplicate any of the items in the User's Guide to MOBILE2 where there have been no changes. For example, the User's Guide to MOBILE2 contains a section on the "General Features of MOBILE2" which is for the most part applicable also for MOBILE3. Although it is possible to run MOBILE3 with this guide alone, the first-time user of the mobile source emission models who is implementing MOBILE3 is strongly encouraged to obtain a copy of the User's Guide to MOBILE2 also for reference. It is available from:

National Technical Information Service
U.S. Department of Commerce
Springfield, VA 22161

Title: User's Guide to MOBILE2
NTIS Ref: PB81205619
Estimated costs (as of 4/1/84)
Paper: $32.50
Microfiche: $4.50

1.1 PRIMARY TECHNICAL DIFFERENCES FROM MOBILE2

Two general types of changes differentiate MOBILE3 from MOBILE2. Changes were made to the basic emission rates for certain vehicle types and model years if new data and an analysis of that data demonstrated a need for change. An example is the basic exhaust emission rates for 1981 and later model year light duty vehicles. The other type of change was in the method in which emission rates are estimated by the program. An example of this is tampering. For MOBILE2, misfueling rates and effects

were hard-coded into the zero-mile levels of the emission rates of vehicles with catalysts. In MOBILE3 the hard-coded emission rates reflect zero tampering, and tampering is added as an offset in gm/mi after the untampered emission rate is estimated by the program.

The following discussions will apply to the second type of change discussed above, since these types have had more impact on the source code. Changes of the first type have already been extensively discussed at various Emission Factor Workshops held by the EPA.

1.1.1 Tampering Effects and Anti-Tampering Programs

The effect of misfueling was the only type of tampering that was explicitly included in MOBILE2 emission rates. At the time MOBILE2 was developed, it was felt that misfueling was the only significant form of tampering which the in-use data (on which the emission rates were based) did not adequately reflect. However, prior to the development of MOBILE3, it became evident that other forms of tampering such as catalyst removal might have a significant effect on fleet emission rates. Also, the EPA Tampering Surveys were indicating that certain forms of tampering were more prevalent than the rates found in EPA's in-use emissions data. As a result, MOBILE3 was designed to incorporate a new concept: basic emission rates are estimated for untampered vehicles and the effects of tampering are included as offsets to the basic emission rates. The tampering offsets in gm/mi are estimated from the percentage of vehicles being tampered at a given time and the effects of such tampering.

The types of tampering which are included in fleet MOBILE3 emission rates are presented in Table 1. Any one or more than one type may apply to light duty gasoline vehicles (LDGV's), light duty gasoline trucks 1 and 2 (LDT1's and LDT2's) and heavy duty gasoline vehicles (HDGV's), where applicable by vehicle and technology type.

Table 1
Types of Tampering Included in
MOBILE3 Emission Rates

1. Misfueling (other than fuel inlet disablement)
2. Fuel Inlet Disablement
3. Catalyst Removal
4. EGR
5. Evaporative Canister
6. PCV System (vacuum hose)
7. Air Pump

An analysis of the frequency of the above types of tampering indicated that as cars get older and accumulate more mileage, they experience more disablements. To account for this, the frequency of disablements are assumed to grow at a linear rate with mileage. The emission effects of

each disablement were estimated from testing of in-use and test vehicles. These effects are assumed to be independent of the mileage at which a vehicle is disabled.

The tampering frequencies incorporated into MOBILE3 are based on national averages for non-I/M and I/M areas separately. Users have the option to input local rates.

MOBILE3 also has the capability to take into account the effects of various anti-tampering programs (ATP's). The characteristics of various kinds of ATP's were discussed in the EPA technical report "Anti-Tampering and Anti-Misfueling Programs to Reduce In-Use Emissions From Motor Vehicles", December 31, 1983 (EPA-AA-TSS-83-10). The credits for the kinds of programs discussed in the above technical report are found in Appendix D and also on the MOBILE3 tape following the MOBILE3 source code. Users who plan to model the effects of an ATP should first obtain and read the above technical report*. The actual credits given to any ATP, however, must be determined in consultation with the EPA staff listed below:

U.S. Environmental Protection Agency
Field Operations and Support Division EN-397F
401 M Street, S.W.
Washington, DC 20460
(202) 382-2640

Table 2 provides a general road map for other information in this User's Guide pertaining to anti-tampering programs.

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* Available from the Technical Support Staff, EPA, Ann Arbor, Michigan, 48105, (313) 668-4367.

Table 2
Sections Containing Information on
Anti-Tampering Programs in MOBILE3

Chapter	Section	Information
2	2.1.3.2	Discusses the input flag settings necessary to include the effects of an ATP.
	2.2.4	Discusses entering ATP characteristics such as start model year in ONE-TIME DATA, and inputting of credit matrices.
3	3.2.8	Discusses range checking errors on ATP inputs.
4	4.1	Discusses the MOBILE3 tape and location of ATP credits.
Appendix	D	Copy of all ATP credits.

1.1.2 Low Temperature CO Offset Model

MOBILE2 used a log-linear equation to correct the emissions of vehicles at different temperatures. The basic emission rates in both MOBILE2 and MOBILE3 are based on emission data collected during the Federal Test Procedure (FTP). The allowed ambient temperature range for the FTP is 68°F to 86°F, but typically it is very close to 75°F.

The MOBILE2 correction factor equation is:

Correction Factor = K*exp(T-68), where

K = constant
T = Temperature
68 = lower end of the FTP temperature range. 86 was used for estimating emissions at temperatures above the FTP temperature range (68°F to 86°F).

MOBILE2 used a separate factor (K) for each mode of operation (cold-start, stabilized, hot-start).

For MOBILE3 new data were collected on in-use 1980 and 1981 vehicles. These data revealed that an additive model would better represent the temperature correction than a multiplicative log-linear model for cold-start CO emissions. The existing log-linear model was still acceptable

for stabilized and hot-start CO and all modes of operation for HC and NO_x. MOBILE3 was reprogrammed to accommodate the offset model for cold-start CO emissions. MOBILE3 calculates a cold-start CO offset with the equation:

$$\text{Offset(gm/mi)} = (-1.3812\ \text{g/mi/°F})*(T-75)$$

Note that emissions are now referenced from 75°F instead of 68°F. The mean ambient temperatures associated with the vehicles tested for MOBILE3 were 75°, 50°, and 20°. When a model of emissions was constructed through these temperatures it resulted in a small but significant offset at 68° relative to 75°. To avoid the improper prediction of emissions based on these models between 68°F and 86°F, the low and high reference temperatures were changed to 75°F for the CO offset and the log-linear models.

1.1.3 Methane Offsets

MOBILE2 used fractions to estimate nonmethane hydrocarbon (NMHC) emissions from total hydrocarbon emissions. For example, 1975-80 NMHC emissions were estimated to be 87% of the total hydrocarbon (THC) emissions from 1975-80 vehicles. The fraction approach assumes that there is significant deterioration in methane emissions with mileage or age.

The MOBILE3 analysis of NMHC emissions revealed that there is little if any deterioration in methane emissions with mileage. Therefore, methane offsets were developed for all model years and vehicle classes. Nonmethane emissions in MOBILE3 are now estimated as the difference between total hydrocarbon emissions which include deterioration with mileage, and the methane offsets which are constant regardless of mileage.

1.1.4 Inspection and Maintenance Test Procedures and Standards

The Inspection and Maintenance (I/M) benefits for 1981 and later light duty gas vehicles are changed from what they were in MOBILE2. In addition, there is a new methodology for specifying I/M program characteristics in estimating benefits for these model years. The methodology for previous model years is the same as in MOBILE2.

The Identification Rate (IDR) was used in MOBILE2 to calculate I/M benefits of 1981 and later LDGV's. The IDR was the percent of primary failures identified by the I/M program, and was based on the type of short test and cutpoints used. Benefits were available for IDR's ranging between 50-90%.

For MOBILE3, the actual IDR's based on test data of 1981 and later vehicles are represented by I/M test types and I/M emission standards. Instead of inputting an IDR for 1981 and later vehicles, users may now select from three test types and emission standard scenarios. These choices are shown in Table 3.

Table 3
I/M Test Types and Emission Standard Scenarios

Test Type	Emission Standards (CO %/HC ppm)
Idle	0.5/100
	1.2/220
	3.0/300
2500/Idle	0.5/100
	1.2/220
	3.0/300
Loaded/Idle	0.5/100
	1.2/220
	3.0/300

Users who are estimating the benefits of I/M should choose the above scenario that most closely resembles the planned or actual annual I/M program they are modeling. Users who plan to estimate I/M benefits of programs less stringent than those above should seek additional guidance from:

Technical Support Staff
Environmental Protection Agency
2565 Plymouth Road
Ann Arbor, Michigan 48105
(313) 668-4374

1.1.5 Heavy Duty Diesel Vehicle Mileage Accumulation

MOBILE2 used a single vehicle miles traveled (VMT) versus age curve for heavy duty diesel vehicles which was based on the VMT characteristics of Class 7 and Class 8* diesel trucks. These trucks are used in many over-the-road highway applications, and thus have very high VMT per year.

In 1982, truck manufacturers started selling diesel trucks in the 2B class (8,500-10,000 lbs. GVW). Sales in this class are expected to continue to grow. The net result is that the average GVW of a diesel truck is changing, and it is no longer appropriate to assume that all diesel trucks have VMT accumulation rates like Class 7 and 8 trucks. The Class 2B diesels being sold probably have VMT characteristics much more like Class 2 gasoline trucks.

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* Class 7 trucks are those with GVW's in the 26,000-33,000 lb. range. Class 8 trucks are those with GVW's in excess of 33,000 lbs.

This evolution of truck VMT is handled in MOBILE3 by re-estimating the VMT distributions used for heavy duty diesel vehicles in every calendar year.* Four VMT distributions for heavy duty diesel vehicles (one each for Class 2B vehicles, Class 3-5 vehicles, Class 6 vehicles, and Class 7-8 vehicles) are present in the block data. A new subroutine has been added (HDDMYM) to MOBILE3 which weights these VMT distributions together by the registration fractions of each vehicle class category in each calendar year. Registration projections by class category are made for the years 1980-2020. The pre-1980 calendar year distributions are assumed to be the same as the 1980 distribution.

MOBILE3 does not have the option of allowing users to input separate VMT distributions for these different weight classes of heavy duty diesel vehicles via the ONE-TIME DATA Section. Users do have the option, however, of inputting a single heavy duty diesel mileage distribution in the ONE-TIME DATA Section, which is then applied to all calendar years. This is the same as in MOBILE2.

1.1.6 Elimination of California-Specific Emission Rates

MOBILE2 had the capability to estimate emissions for California as well as high altitude and low altitude 49-state emissions. California-specific emission rates were based on the California emission standards and technologies found in California. Due to resource considerations and the fact that California has its own in-use emission model (the current version is "EMFAC7"), this option was dropped for MOBILE3, and all data blocks and computer code related to the estimation of California emission rates were deleted.

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* A similar change was not made for heavy duty gasoline vehicles because of the similarity of mileage accumulation rates between different weight classes.

Chapter 2
MOBILE3 INPUTS

2.0 INTRODUCTION

MOBILE3 uses approximately the same data set as MOBILE2 to supply program control information and data describing the scenarios for which emission factors are to be calculated. However, two new flags have been added, three have been deleted, two have had options removed, and the rest have had their value ranges shifted. Users who have not had experience with MOBILE2 should refer to the User's Guide to MOBILE2 for additional information.

2.1 CONTROL SECTION CHANGES

2.1.1 Deletions

INFLAG, TRKFLG and UNFFLG (records 3, 10, 16) were left in the MOBILE2 code to allow the user to continue to execute MOBILE1 input streams in MOBILE2. However, the addition of two new flags and the alteration of two others for MOBILE3 resulted in an input stream that was again different from MOBILE2. It was decided that upward compatability of the input streams to the new model was no longer practical. Therefore, INFLAG, TRKFLG and UNFFLG were removed.

2.1.2 Changes

2.1.2.1 ALTFLG (Record 7)

This flag was renamed "NEWFLG". Its function of inputting new or alternate emission rates was not changed.

2.1.2.2 IMFLAG (Record 8)

A slight change was made to this flag to conform to changes also made in the I/M ONE-TIME DATA section. The MOBILE2 options were:

0 - No I/M program.
1 - MOBILE2 supplied I/M credits.
2 - User inputs I/M credits.

There are only two options in MOBILE3:

1 - No I/M program.
2 - I/M program.

Further instructions on the use of option 2 for IMFLAG are found in the discussion of ONE-TIME DATA.

2.1.2.3 IFORM (Record 11)

The descriptive output format from MOBILE1 has been eliminated because every feature of this output (and some further enhancements) is available in the MOBILE3 112 column descriptive output format. However, the MOBILE1 numeric output format has been retained. The MOBILE3 output format options are:

1 - MOBILE1 numeric output format.
2 - MOBILE2 numeric output format.
3 - MOBILE3 112 column descriptive output format.
4 - MOBILE3 80 column descriptive output format.

2.1.2.4 Range Changes

The options for the following flags have remained the same, but the code values to select them have been altered to always start at 1, instead of 0: IPROMT, SPDFLG, VMFLAG, NEWFLG, ALHFLG, PRTFLG, ICEVFG, and NMHFLG. See Tables 8-9 for the MOBILE3 code values.

2.1.3 New Flags

2.1.3.1 TAMFLG

A new flag, TAMFLG, has been put in place of the MOBILE2 INFLAG (Record 3). It is used to select the tampering rates used by the MOBILE3 program. The options are:

1 - Use default national average tampering rates already in MOBILE3.
2 - User supplies a replacement set of rates.

Two things should be noted about the use of option 2 for TAMFLG. First, since EPA has found that tampering rates increase with mileage and has structured MOBILE3 around this concept, the user must input the intercept (ZMLTAM) and slope (DRTAM) of each tampering rate as a function of mileage. This information should be based on local survey data. Second, TAMFLG works in conjunction with IMFLAG. EPA has found that tampering rates are lower in I/M areas than in non-I/M areas (or after the start of an I/M program as compared to before I/M). Therefore, if TAMFLG is set at 2 and IMFLAG at 2, the user must input both non-I/M and I/M tampering rates. If TAMFLG is 2 and IMFLAG is 1, only the non-I/M rates will be expected by the program. This is further illustrated in the MOBILE3 examples 2 and 5.

2.1.3.2 ATPFLG

A new flag ATPFLG has replaced TRKFLG (Record 10). This flag controls whether the program estimates the effects of an anti-tampering program (ATP). The options are:

1 - No anti-tampering program.
2 - User specifies an anti-tampering program.

The selection of option 1 tells the program that the emission rates should not include the effects of any ATP. The selection of option 2 tells the program that the effects of an ATP are to be included, and that four 11x11 credit matrices will be inputted by the user in the ONE-TIME DATA section. These credits will allow the program to estimate the effects of the ATP. The credit matrices that have been developed by EPA are present on the MOBILE3 tape; however, users who plan to estimate the effects of an ATP should consult with the EPA at the address listed in Section 1.1.1 before using any of the credit matrices.

2.2 ONE-TIME DATA SECTION

The ONE-TIME DATA Section contains information which is input only once in MOBILE3. This input information is used to alter the internal MOBILE3 estimates to be locality dependent. For example, a user can incorporate VMT, mileage accrual and/or registration distributions that are specific to the area of concern. These records are optional, their use being dictated by the values of some of the flags in the CONTROL Section. If any of these records are included in the input, they follow immediately after the CONTROL Section in the order in which they are described below.

The ONE-TIME DATA Section will be included if one or more of the following MOBILE3 options is selected:

1. The user wishes to input local tampering parameters (TAMFLG=2).

2. The user wishes to supply a VMT mix which will be applied to all emission factor calculations (VMFLAG=3).

3. The user wishes to use local mileage accumulation and/or registration distributions (MYMRFG=2, 3, or 4).

4. The user wishes to modify the basic exhaust emission rates used in the calculation of the emission estimates (NEWFLG=2).

5. The user wishes to include Inspection/Maintenance credits in the emission factor calculations (IMFLAG=2).

6. The user wishes to modify the average number of trips per day and miles per day for the calculation of evaporative HC emissions (ICEVFG=3 or 4).

7. The user wishes to include the effects of an anti-tampering program in the emission rates (ATPFLG=2).

Only items 1 and 7 were not present in MOBILE2.

The data requirement order in the ONE-TIME DATA Section is the same order as the associated flags in the CONTROL Section.

2.2.1 Local Tampering Parameters

Certain combinations of TAMFLG and IMFLAG require the input of local tampering parameters into ONE-TIME DATA. These combinations are summarized in Table 4.

Table 4
Combinations of TAMFLG and IMFLAG Which Require
Input of non-I/M and I/M Local Tampering Data

TAMFLG	IMFLAG	Non-I/M Tampering Data	I/M Tampering Data
2	1	Yes	No
2	2	Yes	Yes

Data to be entered are the zero-mile percentages of tampering and the percent increases in tampering for each tampering item per 10,000 (10K) miles. There are seven categories of tampering (presented previously in Table 1) for four vehicle types (LDV's, LDT1's, LDT2's and HDGV's). The format for the zero-mile levels is 7F8.4 and the format for the slopes is 7F9.5. For further detail, see Examples 2 and 5 in Chapter 5.

2.2.2 Emission Factor Modifications

These are entered exactly as in MOBILE2. However, because the default emission rates have been changed for MOBILE3, the number of equations allowed for the various classes and regions have changed. Also, the array sizes have all been increased from 15 to 20. Table 5 is a summary of the number of alternative equations that can be entered into MOBILE3.

Table 5
Number of Alternative Equations That Can be
Entered in MOBILE3 by Pollutant, Region
(Low Altitude/High Altitude), and Vehicle Type

Vehicle	HC		CO		NOx	
Type	LO	HI	LO	HI	LO	HI
LDGV	8	6	7	5	7	6
LDGT1	10	7	9	7	12	8
LDGT2	12	11	11	11	13	11
HDGV	5	5	5	5	5	5
LDDV	14	12	14	12	12	12
LDDT	17	15	17	14	16	13
HDDV	7	7	7	7	7	7
MC	17	17	17	17	17	17

2.2.3 Inspection/Maintenance Data

If IMFLAG (Record No. 8) has the value 2, the user must input one record describing the I/M program characteristics. The nine required characteristics are listed below followed by allowable ranges in parentheses:

1. Last two digits of year of I/M program implementation (60-99, 00-20).

2. Stringency level of I/M program (10-50).

3. Mechanic training flag, indicating whether mechanic training is an integral part of the I/M program (1=No/2=Yes).

4. Earliest model year included in I/M program (41-99, 00-20).

5. Latest model year to be included in the I/M program (41-99, 00-20, but not earlier than value in item 4).

6. The type of vehicles to be affected by I/M.
   1 - LDGV.
   2 - LDGV and LDGT1.
   3 - LDGV and LDGT2.
   4 - LDGV and LDGT1 and LDGT2.

7. The type of I/M test being implemented for 1981 and later light duty vehicles. The choices are:

   ITEST: 1 = Idle Test.
   2 = Two-Speed Idle Test.
   3 = Loaded Test.

8. The standards used in conjunction with the I/M short test for 1981 and later light duty vehicles. The choices are:

   ICUTS: 1 = 0.5% CO/100 ppm HC.
   2 = 1.2% CO/220 ppm HC.
   3 = 3.0% CO/300 ppm HC.

9. The data flag which indicates whether or not alternative I/M credits are used in the MOBILE3 analysis. If this flag has a value greater than zero, new I/M credit data need to be supplied on Unit 4. The new I/M credit data are generated by EPA from an I/M applications simulation package. The possible values for the alternative I/M data flag are as follows:

   1 - No alternative I/M credits.
   2 - Alternative Technology I and II I/M credits.
   3 - Alternative Technology IV I/M credits.
   4 - Alternative I/M credits for all Technologies.

Items 4 and 5 give the user the capability of excluding a specified range of model years from the I/M program. If all years are included in the program, the last two items should be given the values 41 and 20, respectively.

The format of the entire record is I2,1X,I2,1X,I1,1X,I2,1X,I2,1X,I1,1X, I1,1X,I1,1X.

Program Characteristics - If the ninth I/M characteristics flag is set at either 2, 3, or 4, the data file containing these alternate I/M credits must be attached to logical input/output device number 4 in the users runstream. For additional information on the logical input/output device numbers, see Chapter 4 "MOBILE3 Implementation".

If users in a locality have an I/M program that cannot be simulated with the existing I/M software in MOBILE3, they should contact the Technical Support Staff of the U.S. EPA in Ann Arbor, Michigan, for alternate I/M credits. It is recommended that users not alter the MOBILE2 I/M credits without the guidance of the Technical Support Staff.

2.2.4 Anti-Tampering Program Data

If ATPFLG has the value of 2, MOBILE3 will assume an anti-tampering program is to be simulated and will require the addition of anti-tampering program characteristics in the ONE-TIME DATA section of the input sequence. The four required characteristics are listed below.

1. Last two digits of the year of ATP implementation (60-99, 00-20).

2. First model year included in ATP (41-99, 00-20).

3. Last model year included in ATP (41-99, 00-20).

4. Vehicle classes covered by ATP. If a vehicle class is covered, the value must be 2, if not, the value must be set at 1. Four vehicle classes can be covered: LDGV's, LDGT1's, LDGT2's, and HDGV's. See below.

Class	Not Covered	Covered
LDGV	1	2
LDGT1	1	2
LDGT2	1	2
HDGV	1	2

The format of this record is I2,1X,I2,1X,I2,1X,I4.

Effectiveness Credit Data - Since no ATP credits are stored in MOBILE3, the data file containing these credits must be attached to logical input/output device 3 in the user's runstream.

Anti-tampering credits represent the fraction of excess emissions due to tampering and misfueling which remain after the start of a program to reduce tampering and/or misfueling. These credits are found in Appendix D and on the MOBILE3 tape, however, selection of any particular credit block must be made in consultation with EPA.

Appendix D and the MOBILE3 tape contain credits for many possible program options. These options include programs which inspect:

- Annually
- Biennially
- Upon Change-of-Ownership
- Random Audits of 1%, 2%, and 5% of the fleet.

Each option may include the inspection of a combination of one or more items. The options which EPA has already determined credits for are shown in Table 6. Other options can be determined by EPA on a case-by-case basis. In each option it is assumed that all disabled or missing emission control equipment is repaired or replaced, without cost waivers. Also, if either the fuel inlet restrictor has been tampered to allow entry of a leaded fuel nozzle or the lead sensitive test paper detects lead deposits in the tailpipe, it is assumed that the catalyst is replaced.

Table 6
Inspection Combinations for Which EPA
Has Determined ATP Credits*

- Air Pump Only
- Air Pump and Catalyst
- Air Pump and Catalyst and Fuel Inlet
- Catalyst Only
- Catalyst and Fuel Inlet
- Catalyst and Fuel Inlet and Lead Deposit Test
- Air Pump and Catalyst
- Air Pump and Fuel Inlet and Lead Deposit Test

The anti-tampering program credits consist of a single line of factors for PCV and evaporative canister systems followed by four 11x11 arrays representing credits for HC/CO emissions and NO_x emissions separately for tampering and misfueling occuring before and subsequent to the date the anti-tampering program begins as specified in the ONE-TIME DATA section. When a unity matrix (zeros with a major diagonal line of 1.0) is inputted, the anti-tampering program has no effect on emissions. Each of the eleven rows and columns represent a unique combination of the tampering and misfueling types modeled in MOBILE3.

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* All of the combinations can easily include either the PCV check or the evaporative canister check or both.

Each set of anti-tampering credits will depend on the type of anti-tampering program proposed, so that an area investigating several program options would require several different sets of anti-tampering credits specific to each of the program options. Since there is assumed to be overlap between types of tampering and misfueling behavior, the sum of the benefits from two separate program options might not necessarily be the same as the combination of the two options into a single program. EPA should be consulted if such a combination is proposed.

An anti-tampering program with a common set of program requirements for all covered model years (e.g., inspection for catalyst presence), and no program requirements for exempted model years requires only one 45 line set of anti-tampering credits. The vehicle class of model year coverage is specified in the ONE-TIME DATA section. In order to evaluate an anti-tampering program which has different program requirements depending on vehicle model year or vehicle type (e.g., air pump subsystem on all model years and catalyst inspection only on 1981 and later model years) a 45-line set of anti-tampering credits would be required for each set of program requirements applicable to a model year group or vehicle type group, and separate MOBILE3 runs would be required to evaluate each part of the program.

2.3 PARAMETER SECTION

There are no changes in this Section from MOBILE2.

2.4 SUMMARY OF MOBILE3 INPUT SEQUENCE

Table 7 is an input record sequence summary for all flags in MOBILE3. Tables 8-10 summarize all options for each of the flags for MOBILE3.

Table 7
MOBILE3 Input Record Sequence Summary

Input Record Sequence	Section
1 IPROMT FLAG record	CONTROL
1 PROJID record	CONTROL
1 TAMFLG FLAG[1] record	CONTROL
1 SPDFLG FLAG[1] record	CONTROL
1 VMFLAG FLAG[1] record	CONTROL
1 MYMRFG FLAG[1] record	CONTROL
1 NEWFLG FLAG[1] record	CONTROL
1 IMFLAG FLAG[1] record	CONTROL
1 ALHFLG FLAG[1] record	CONTROL
1 ATPFLG FLAG[1] record	CONTROL
1 IFORM FLAG[1] record	CONTROL
1 PRTFLG FLAG[1] record	CONTROL
1 ICEVFG FLAG[1] record	CONTROL
1 IDLFLG FLAG[1] record	CONTROL
1 NHMFLG FLAG[1] record	CONTROL
(16 TAMPERING records, required if TAMFLG = 2)[2]	ONE-TIME DATA
(1 VMT MIX record, required if VMFLAG = 3)	ONE-TIME DATA
(16 MILEAGE ACCRUAL records, required if MYMRFG = 2 or 4)	ONE-TIME DATA
(16 REGISTRATION DISTRIBUTION records, required if MYMRFG = 3 or 4)	ONE-TIME DATA
(2-100 EMISSION FACTOR MODIFICATION records, required if NEWFLG = 2)	ONE-TIME DATA
(1 I/M CHARACTERISTICS record, required if IMFLAG = 2)	ONE-TIME DATA
(1 ATP CHARACTERISTICS record, required if ATPFLG = 2)	ONE-TIME DATA
(1 TRIPS/DAY record, required if ICEVFG = 3 or 4)	ONE-TIME DATA
(1 MILES/DAY record, required if ICEVFG = 3 or 4)	ONE-TIME DATA
1 SCENARIO record	PARAMETER[3]
(1 VMT MIX record, required if VMFLAG = 2)	PARAMETER
(1 LD ADDITIONAL CORR. FACTOR record, required if ALHFLG = 2 or 3)	PARAMETER

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1 These 13 flags are inputted on a single record if IPROMT = 3 or 4.

2 Only 8 records if IMFLAG=1 and TAMFLG = 2. There are 2 records (zero-mile level and percent of increase per 10K miles) for each of four vehicle types.

3 The sequence of records in the PARAMETER Section is repeated in order for as many scenarios as the user requires.

Table 8
Flags Controlling Input And Execution

Record Number	Variable Name	Description	Format	Value ----- ACTION
1	IPROMT	Flag for prompting of input.	I1,3A1	1XYZ - No prompting; vertical format.
	IOUNEW	Values for output units as follows: 1) X = Formatted reports unit. 2) Y = Diagnostic messages unit. 3) Z = Prompting messages unit. (Default value for these three output units is 6.)		2XYZ - Program prompts for input; vertical format. 3XYZ - No prompting; horizontal format. 4XYZ - Program prompts for input; horizontal format.
2	PROJID	80 characters for title used as output header.	20A4	--------
3	TAMFLG	Flag for optional input of tampering rates.	I1	1 - Use MOBILE3 tampering rates. 2 - User inputted tampering rates.[1]
4	SPDFLG	Selects speeds for each vehicle type.	I1	1 - Input one speed for all vehicle types.[2] 2 - Input eight speeds; one for each vehicle type.[2]
5	VMFLAG	Selects optional use of user supplied VMT mix among vehicle types.	I1	1 - Use MOBILE3 VMT mix. 2 - User supplies VMT mix for each scenario.[2] 3 - User supplies one VMT mix for all scenarios.[1]
6	MYMRFG	Flag for optional input of registration and/or mileage accural distributions.	I1	1 - Use MOBILE3 registration and mileage accumulation-accrual distributions. 2 - User supplies mileage accumulation distributions.[1] 3 - User supplies registration distributions.[1] 4 - User supplies both distributions for all vehicle types.[1]

Table 8 (Cont'd.)

7	NEWFLG	Flag for optional modification of basic exhaust emission rates by model year.	I1	1 - Use MOBILE3 exhaust emission rates. 2 - User modifies the basic exhaust emission rates.[1]
8	IMFLAG	Flag to include impact of I/M program in calculations.	I1	1 - No I/M program. 2 - Program estimates the impact of I/M.[1]
9	ALHFLG	Flags optional use of four special correction factors: a) air conditioning; b) vehicle load; c)trailer towing; d) humidity(NOx only).	I1	1 - No input values required. 2 - Six input values required.[2] 3 - Ten input values required.[2]
10	ATPFLG	Flag which includes impact of anti-tampering program in emission rates.	I1	1 - No ATP. 2 - Program estimates the impact of ATP.[2]

[1] Input data must be placed in the ONE-TIME DATA Section.
[2] Input data must be placed in the PARAMETER Section.

Table 9
Flags Controlling Output

Record No	Variable Name	Description	Format	Value ------- ACTION
11	IFORM	Selects the structure of formatted output report.	I1	1 - MOBILE1 - type numeric format. 2 - MOBILE2 - type numeric format. 3 - MOBILE3 112 column descriptive format. 4 - MOBILE3 80 column descriptive format.
12	PRTFLG	Selects which pollutants are included in output.	I1	1 - HC only. 2 - CO only. 3 - NOx only. 4 - HC, CO, and NOx.
13	ICEVFG	Controls user input of trips/days and miles/day and additional listing of crankcase and evaporative HC emissions.	I1	1 - No user input; no crankcase and evaporative HC output. 2 - No user input; with crankcase and evaporative HC output. 3 - User inputs[1]; no crankcase and evaporative HC output. 4 - User inputs[1]; with crankcase and evaporative HC output.
14	IDLFLG	Controls output of idle emission factors.	I1	1 - No idle output. 2 - Output idle emission factors.
15	NMHFLG	Selects total or non-methane HC calculations and output.	I1	1 - Total HC. 2 - Non-methane HC.

1 Data requirements must be placed in the ONE-TIME DATA Section.

Table 10
Description of Fields on the Scenario Record

Field	Var. Name	Description	Format	Allowed Values[3]
1	IREJN	Specifies region for which emission factors are to be computed.	I1	1 = Low Altitude 2 = High Altitude
2	CY	Last 2 digits of calendar year for which emission factors are to be calculated.	I2	60 <= CY <= 99 or 00 <= CY <= 20
3	SPD	The single average route speed for which emissions are being calculated.[1]	F4.1	5. <= SPD <= 55. mph
	or SPD(8)	The separate average speeds for each of the eight vehicle types[2].	8(F4.1, 1X)	5. <= SPD <= 55. mph
4	AMBT	Ambient temperature, in degrees Fahrenheit.	F4.1	0°. <= TAMB <= 110.°
5	PCCN	Percent of VMT accumulated in cold-start mode by non-catalyst equipped vehicle types.	F4.1	0. <= PCCN <= 100.
6	PCHC	Percent of VMT accumulated in hot-start mode by catalyst equipped vehicle types.	F4.1	0. <= PCHC <= 100.
7	PCCC	Percent of VMT accumulated in cold-start mode by catalyst equipped vehicle types.	F4.1	0. <= PCCC <= 100.

1 The one average speed input is required if SPDFLG = 1.
2 The eight average speed inputs are required if SPDFLG = 2.
3 Standard values for fields 3-7 are as follows:

SPD	AMBT	PCCN	PCHC	PCCC
19.6 mph	75.0°	20.6%	27.3%	20.6%

Chapter 3
MOBILE3 OUTPUTS

3.0 INTRODUCTION

MOBILE3 has three types of output: formatted reports, diagnostic messages and prompting messages. Four types of formatted reports can be selected in MOBILE3. These reports include the information necessary to identify the scenario being studied and the calculated emission factors by vehicle type. The type of formatted report that is output by MOBILE3 is controlled by the IFORM flag in the CONTROL Section.

The diagnostic messages are used in MOBILE3 to caution the user concerning user-supplied data. Three types of diagnostics exist: errors, warnings, and comments. An error will in all cases terminate the scenario and in some cases the run. Warnings and comments are included to assist users in the interpretation of the results of MOBILE3.

Prompting messages are available from MOBILE3 if the user selects IPROMT=2 or 4. These messages prompt the user to insert the MOBILE3 input data in the proper sequence. In the CONTROL Section, there are two prompting formats: vertical flag input(2) and horizontal flag input(4). Otherwise the prompting messages are identical for both 2 and 4.

3.1 FORMATTED REPORT OUTPUT

The only change to the formatted report output options is that the MOBILE1 descriptive output format option has been eliminated. All other output options are still available. When running MOBILE3 the user will notice that information echoed back to the user is in a slightly different format than it was in MOBILE2. Also, new information that was not being echoed in MOBILE2 is being echoed in MOBILE3. These items are illustrated in the MOBILE3 examples.

3.2 DIAGNOSTIC MESSAGES

This section describes the MOBILE3 diagnostic messages. Running MOBILE3 can result in three types of diagnostic messages: (1) error messages, (2) warning messages, or (3) comments.

Error messages indicate either invalid input data were entered into MOBILE3, or MOBILE3 attempted to perform invalid operations. All error messages are prefixed by "*** Error:". If a number follows "*** Error:", it is the value read by MOBILE3 for the variable in error (the variable name is also printed). If the error message is due to an input value that is out of bounds, the range of acceptable values is also printed. An error will stop a MOBILE3 run. Warning messages indicate that MOBILE3 input data caused an operation not necessarily intended by the user. However, the situation is not serious enough to be labeled an error.

Nonetheless, users should examine the warning messages to ascertain the conditions that were modeled. Comments are a type of warning message that are printed for the user's information. Neither a warning nor a comment will stop a MOBILE3 run.

The following is a list of the individual error, warning, and comment messages. Since most messages refer to user-input values, the messages are grouped by input record type, except for 3.2.11 and 3.2.12. The "Mdd" prefix is for dd = 01 to 83, the code value passed to QUITER to determine the message to be printed. Messages 84-88 are not issued by QUITER.

3.2.1 Read Errors

There are new read errors for MOBILE3 if alternate I/M credits are to be read in and are not provided to the program by the user.

M84 "End-of-file return on read of unit IOUIMD (new I/M credits). Run aborted."

There is also a read error if alternate effectiveness rates are not supplied to calculate the emission rates for an anti-tampering program. The message is:

M85 "End-of-file return on rest of unit IOUAER (ATP effectiveness rates). Run aborted."

If a nonempty file is assigned but the data cannot be read using the MOBILE3 format, then a message is printed, identical to the above except that it begins with 'Error return' instead of 'End-of-file' (messages M86 and M87).

3.2.2 FLAG (CONTROL Section) Record Diagnostics

M02 "*** Error: 'value of IPROMT' out of bounds for flag IPROMT. Prompt/mode type (1 to 4) must be corrected before your next run."

This message appears if IPROMT does not equal 1, 2, 3, or 4. This correction must be made before the program will proceed.

M03-M15 *** Error: 'value of flag' out of bounds for flag 'name of flag'"

This error message precedes message M53 and program termination. It will appear for each of the 13 input/output control flags which is in error. The number appearing after "*** Error:" is the value of the flag read by the program. The allowable flag values are listed in the Section 2.1, Table 8. Each of these messages indicates the value falls outside of the valid bounds for that flag.

M53 "You must correct all flags before you run again."

This message appears if there is an error in reading the CONTROL flags. It should appear after a list indicating which flags are in error (see M03-M15). The flags in error must be corrected before the program will continue.

M71 "Comment: Current output unit numbers are
IOUREP = 'formatted report unit'
IOUERR = 'error/warning/comment unit'
IOUASK = 'prompt message unit'"

This message appears whenever any of the default output unit numbers are changed.

3.2.3 Tampering Rates Diagnostics

M50 "***Error: 'value of ZEROML' out out bounds for tampering rate intercept (up to 1.0)"

The zero-mileage level of tampering cannot exceed 100% (1.0 as a fraction) of the fleet, for each tampering type and vehicle type. See Section 2.2.1 Local Tampering Parameters.

3.2.4 VMT Mix Record Diagnostics

M17 "*** Error: 'value of VMTMIX(I)' out of bounds for VMTMIX (0. to 1.)"

This message is printed if a value of VMTMIX(IV) (vehicle-miles-traveled fraction for vehicle type IV) is not between 0. and 1. See Section 2.2.

M18 "*** Error: 'Value of VMTMIX sum' sum of VMTMIX is not equal to 1."

This message is printed if the sum of VMTMIX(IV) over all vehicle types is not equal to 1. Since each VMTMIX(IV) represents the fraction of total miles that vehicle type I contributes to the total vehicle-miles-traveled by the fleet, the sum of these fractions should equal 1. See Section 2.2.

M48 "*** Error: there are no sales for vehicle 'vehicle name' "

It is assumed that no significant number of LDDV's exist before 1975. Similarly, no LDDT's are assumed prior to 1978. This message is printed if the user inputs a positive VMT fraction for LDDV's or LDDT's for calendar years in which they are assumed to be virtually nonexistent.

M68 "*** Error: EFFTP <=0. AND VMTMIX > 0. for vehicle 'vehicle name'"

No exhaust emissions exist for the named vehicle type; but vehicles of that type have accumulated a nonzero fraction of the total vehicle fleet mileage.

M70 "*** Error: EFIDLE < =0. AND VMTMIX > 0. for vehicle 'vehicle name'"

No idle emissions exist for the named vehicle type; but vehicles of that type have accumulated a nonzero fraction of the total vehicle fleet mileage.

3.2.5 Mileage Accrual and Registration Distribution Diagnostics

M19 "*** Error: 'value of AMAR(JDX,IV)' negative model year mileage"

This message is printed if the user supplied mileage accrual data for model year JDX and vehicle type IV is negative. See Section 2.2.

M20 "*** Error: 'value of JULMYR(JDX,IV)' negative model year registration"

This message is printed if the model year registration fraction is negative. Since this number represents the fraction of all vehicles in the fleet of a given age, it should be between 0 and 1 inclusive. See Section 2.2.

M65 "*** Error: MYR of LDDV not equal to LDGV for JDX = 'value of JDX'"

For description see M66.

M66 "*** Error: MYR of LDDT not equal to LDGT1 for JDX = 'value of JDX'"

Messages M65 and M66 will appear if the user entered a different registration distribution for LDGV's than for LDDV's or for LDGT1's than for LDDT's. The registration mix for the total LDV (or LDT) fleet is to be input twice for the gasoline powered and diesel powered vehicles (or trucks). MOBILE3 has an internal function that apportions total registrations into the separate gasoline and diesel powered groups. Thus, it is assumed in MOBILE3 that LDDV's will replace some of their LDG counterparts and will be used in the same way. See Section 2.2.

M21 "Warning: 'value of JULMYR' registration with zero mileage"

See description in W4.

M22 "Warning: 'value of AMAR' mileage with zero registration"

One of the two preceding messages is printed if, for a given vehicle age, vehicles either do not accumulate mileage, yet make up a fraction of the fleet, or do not make up a fraction of the fleet but accumulate mileage. If a mileage accrual rate or a registration fraction is zero, both should be zero. See Section 2.2.

M49 "Warning: 'value of CHKMYR' MYR sum not = 1. (will normalize)"

This message is printed if the sum of model year registration fractions for a given vehicle type do not sum to 1. If the model year age registration fractions do not sum to 1, MOBILE3 will normalize the fractions so that they will. See Section 2.2.

3.2.6 Emission Factor Modification Diagnostics

M23 "*** Error: 'value of NEWCT' out of bounds for e.f. changes (1 to 100 pairs)"

This message is printed if the number of emission rate modifications is not between 1 and 100. MOBILE3 is limited to handle a maximum of 99 modifications. See Section 2.2.2.

M62 "*** Error: 'value of NEWREG' out of bounds for new e.f. region (1,2,3 only)"

The region entered for a new (replacement) emission equation can be specified as 1, 2 or 3 only. It is independent of the region entered in the SCENARIO record. See Section 2.2.2.

M25 "*** Error: 'vehicle type code' out of bounds for vehicle type (1 to 8)"

This message is printed if the vehicle type in the emission rate modification section is not equal to 1, 2, 3, 4, 5, 6, 7, or 8. MOBILE3 has eight vehicle types. These types and their corresponding codes are: (1) light duty gasoline powered vehicles, (2) light duty gasoline powered trucks I (0 - 6,000 lbs. GVW), (3) light duty gasoline powered trucks II (6,001 - 8,500 lbs. GVW), (4) heavy duty gasoline powered vehicles (8500+ lbs.), (5) light duty diesel powered vehicles, (6) light duty diesel powered trucks (0-8500 lbs.), (7) heavy duty diesel powered trucks (8500+ lbs.), and (8) motorcycles. See Section 2.2.2.

M26 "*** Error: 'pollutant code' out of bounds for pollutant (1 to 3)"

This message is printed if the code for pollutant on the emission rate modification input section is not equal to 1, 2, or 3. MOBILE3 considers only 1 for hydrocarbons, 2 for carbon monoxide, and 3 for oxides of nitrogen. See Section 2.2.3.

M27 "*** Error: 'value of MYFRST or MYLAST' out of bounds for year (1941 to 2020)"

This message is printed if the code, corresponding to the first or last model year to have altered emission rates is not between 41 and 99 or 00 and 20 (corresponding to years 1941-2020). See Section 2.2.2.

M29 "*** Error: Last year cannot be less than first year"

This message is printed if the first model year to have its emission rates altered is less than the last model year to be altered. See Section 2.2.2.

M30 "*** Error: 'value of ZMLNEW' intercept must be positive"

This message is printed if a new zero-mile emission level is negative or zero. See Section 2.2.2.

M51 "*** Error: equation 'number of equation' causes more than 15 allowed for any 1 reg/mode/pol"

When emission rate modifications are made, no more than 15 modified emission equations may be input for any region, vehicle type, and pollutant combination. See Section 2.2.2.

M67 "*** Error: EFFTP > 0. and GSF=0. for vehicle 'vehicle name'"

This error message will be printed if the named vehicle type has a positive FTP emission factor and a zero fleet sales fraction.

M69 "*** Error: IDLRTM > 0. and GSF=0. for vehicle 'vehicle name'"

The named vehicle type has a positive idle emission factor and a zero fleet sales fraction.

M31 "Warning: 'value of DRNEW' negative slope for ageing vehicle"

This message is printed if the value for the exhaust deterioration rate is negative. A negative deterioration rate implies improving emissions with increasing mileage accumulation. See Section 2.2.2.

M59 "Warning: equation 'equation number' zeroes all idle coefficients (and total) for IR = 'region', IV = 'vehicle', IP = 'pollutant'"

All alternative emission equations cause the program to zero all idle emission equations corresponding to the region, vehicle type, and pollutant modified.

3.2.7 Inspection/Maintenance Data Diagnostics

M32 "*** Error: 'value of ICYIM' out of bounds for year (1960 to 2020)"

This message is printed if the code indicating the year in which an I/M program is to begin does not fall between 60 and 99, or 00 and 20 (years 1960 to 2020). See Section 2.2.3, I/M program description, field 1.

M33 "*** Error: 'value of ISTRIN' out of bounds for stringency (10 to 50)"

This message is printed if the stringency of the I/M program for 1980 and earlier LDV's is not between 10 and 50 inclusive. See Section 2.2.3, I/M program description, field 2.

M34 "*** Error: 'value of IMTFLG' out of bounds for mechanics training (1 to 2)"

This message is printed if the value for the mechanics training flag, IMTFLG, is not equal to 1 or 2. See Section 2.2.3, I/M program description, field 3.

M35 "*** Error: 'value of MODYR1' out of bounds for MODYR1 (1941 to 2020)"

This message is printed if the code representing the first model year under an I/M program is not between 41 and 99, or 00 and 20 (years 1941 and 2020). These years are the limits set by MOBILE3. See Section 2.2.3, I/M program description, field 4.

M36 "*** Error: 'value of MODYR2' out of bounds for MODYR2 (1941 to 2020)"

This message is printed if the code representing the last model year under an I/M program is not between 41 and 99, or 00 and 20 (years 1941 to 2020). See Section 2.2.3, I/M program description, field 5.

M37 "*** Error: MODYR1 cannot be greater than MODYR2"

This message is printed if the first model year in an I/M program is greater than the last model year in an I/M program. See Section 2.2.3, I/M program description, fields 4 and 5.

M72 "*** Error: 'Value of ILDT' out of bounds for vehicle type (1 to 4)"

Value for the vehicle types to which I/M is applied is not between 1 and 4. See Section 2.2.3, I/M program description, field 6.

M73 "*** Error: 'value of ITEST' out of bounds for short test type flag (1 to 3)"

Value of the I/M Technology IV+ short test type flag is not 1, 2 or 3. See Section 2.2.3, I/M program record description, field 7.

M82 "*** Error: 'value of ICUTS' out of bounds for 1981+ vehicles cutpoint flag (1 to 3)"

Value of the I/M Technology IV+ cutpoint flag is not 1, 2 or 3. See Section 2.2.3, I/M program record description, field 8.

M74 "*** Error: 'Value of NUDATA' out of bounds for new I/M data flag (1 to 4)"

Value of the NUDATA flag (the flag from the I/M parameter record that indicates whether or not new I/M credits will be read from unit IOUIMD) is not 1, 2, 3 or 4. See Section 2.2.3, I/M program description, field 9.

3.2.8 Anti-Tampering Data Diagnostics

M75 "*** Error: 'value of LAPSY' out of bounds for anti-tampering program start year"

Value of the start year for the selected anti-tampering program (ATP) is not in the range 1960-2020. See Section 2.2.4, ATP record description, field 1.

M76 "*** Error: 'value of LAP1ST' out of bounds for anti-tampering program 1st model year"

Value of the first model year included in the selected ATP is not in the range 1941-2020. See Section 2.2.4, ATP record description, field 2.

M77 "*** Error: 'value of LAPLST' out of bounds for anti-tampering program last model year"

Value of the last model year included in the selected ATP is not in the range 1941-2020. See Section 2.2.4, ATP record description, field 3.

M78 "*** Error: 'value of LVTFLG (IVTAM)' out of bounds for anti-tampering vehicle type (1 to 2)"

Value entered for the ATP vehicle class inclusion flag for vehicle type IVTAMP is not either 1 (not covered) or 2 (covered). See Section 2.2.4 ATP record description, field 4.

M79 "*** Error: 'value of EVP' out of bounds for evap ATP evvectiveness rate (0. to 1.)"

Value entered as an evaporative ATP effectiveness rate is not in the range 0.0 to 1.0. These rates act as percentage credits, and hence must be nonnegative and not exceed unity. See Section 2.2.4 ATP Data, Effectiveness Credit Data subsection.

M80 "*** Error: 'value of RATE' out of bounds for exh ATP effectiveness rate (0. to 1.)"

Value entered as an exhaust ATP effectiveness rate is not in the range 0.0 to 1.0. These rates act as percentage credits, and hence must be nonnegative and not exceed unity. See Section 2.2.4 ATP Data, Effectiveness Credit Data subsection.

M81 "*** Error: 'value of COLSUM' out of bounds for AER matrix file column (0. to 1.)"

Each column of each of the 4 exhaust ATP effectiveness rate matrices in the data file attached to device 3 must sum to a nonnegative value not exceeding unity. See Section 2.2.4 ATP Data, Effectiveness Credit Data subsection.

3.2.9 Trips/Day and Miles/Day Record Diagnostics

M54 "*** Error: 'value of USRTPD' average trips/day cannot be negative"

This message is printed if the user supplied trips per day is negative. See Section 2.2.

M55 "*** Error: 'value of USRMPD' average miles/day cannot be negative"

This message is printed if the user supplied miles per day is not positive. See Section 2.2.

3.2.10 Scenario Record Diagnostics

Individually, errors described below will not cause the program to stop but will void analysis of the scenario associated with the error and all subsequent scenarios. If one of these messages appears, the error must be corrected for that scenario. If more than 50 of these errors occur the program run will stop.

M24 "*** Error: 'region code' out of bounds for region (1, 2, 3 only)"

This message is printed if the region chosen in the scenario record is not equal to 1, 2, or 3. See Section 2.3.1. Note: Do not use region 3. It is intended to be used for evaluated altitude, but MOBILE3 software does not currently support this option. See messages M58 and M83 below.

M38 "*** Error 'value of CY' out of bounds for year (1960 to 2020)"

This message is printed if the calendar year to be evaluated is not between 1960 and 2020, inclusive. This is a limitation of MOBILE3.

M39 "*** Error: 'value of SPD(I)' speed must be positive"

This message is printed if the value for average speed is not positive.

M40 "*** Error: 'value of TAMB' valid temperature is 0-110 deg (F)"

This message is printed if the temperature value does not fall between 0 and 110°F. These limits correspond to the limits of the temperature correction factor.

M41 "*** Error: 'value of PCCN' out of bounds for PCCN (0. to 100.)"

This message is printed if the input value for percentage of miles traveled in the cold-start mode for noncatalyst vehicles is not in the 0-100% range.

M42 "*** Error: 'value of PCHC' out of bounds for PCHC (0. to 100.)"

This message is printed if the input value for percentage of miles traveled in the hot-start mode for catalyst vehicles is not in the 0-100% range.

M43 "*** Error: 'value of PCCC' out of bounds for PCCC (0. to 100.)"

This message is printed if the input value for percentage of miles traveled in the cold-start mode for catalyst vehicles is not in the 0-100% range.

M63 "*** Error: 'value of sum PCHC + PCCC' out of bounds (0. < = PCHC + PCCC <= 100.)"

The sum of the cold/hot-start VMT percentages for vehicles with catalytic converters must lie in the range of 0 to 100 percent.

M64 "*** Error: 'value of sum PCHC + PCCC - PCCN' out of bounds (0.< =PCHC + PCCC - PCCN <= 100.)"

The sum of the cold/hot-start VMT percentages for vehicles with catalytic converters less that of the non-catalytic converter equipped vehicles must lie in the range of 0 to 100 percent.

M58 "*** Error: 'value of ALT' out of bounds for altitude (-200 to 10,000 ft.)"

The altitude entered must lie between 200 feet below and 10,000 feet above mean sea level. See Section 2.3.2. Note: This message would only occur if the user inputs region 3. Region 3 for intermediate altitude is currently not supported by MOBILE3.

M83 "*** Error: 'value of ALT' out of bounds for altitude (region = 3 => .t < 1500).

MOBILE3 has the input and control code to setup an evaluated altitude run, given the user has selected region = 3 and altitude between -200 and 10,000 feet. But the interpolation (between low and high altitude results) algorithm has not been selected. In the interim, an entered altitude less than 1500 feet will be processed as a low altitude run. An entered altitude equal to or greater than 1500 feet will lead to M83 and the scenario will be aborted.

M16 "Warning: 'value of SPD' speed reduced to 55 m.p.h. maximum"

This message appears if the value for speed is greater than 55. MOBILE3 limits the speed to 55 mph. Speed correction factor equation coefficients are only valid in the range of 5 mph through 55 mph.

M52 "Warning: 'value of SPD' speed increased to 5 m.p.h. minimum"

This message is printed if the average speed is less than 5 mph. An average speed of less than 5 mph is assumed to be unlikely, and the value is reset to 5 mph. Speed correction factor equation coefficients are only valid for speeds of 5 mph through 55 mph.

3.2.11 Additional Light Duty Correction Factor Record Diagnostics

M44 "*** Error: 'value of AC' out of bounds for AC (0. to 1.)"

The air conditioning input value that indicates whether the A/C correction factor is used must range from zero to one.

M45 "*** Error: 'value of XLOAD(I)' out of bounds for extra load (0. to 1.)"

Extra load usage fraction for each vehicle type must range from zero to one.

M46 "*** Error: 'value of TRAILR(I)' out of bounds for trailers (0. to 1.)"

Trailer towing usage fraction for each vehicle type must range from zero to one.

M47 "*** Error: 'value of ABSHUM' out of bounds for humidity (20. to 140.)"

Absolute humidity (grains/pounds) must range from 20 to 140.

M57 "*** Error: WB temp cannot be greater than DB temp"

Wet bulb temperature must be less than or equal to the dry bulb temperature.

M56 "Comment: A/C correction factor will be calculated.
Value of inputted AC usage parameter is ignored."

This message appears if a value for air conditioning usage other than zero is entered. The air conditioning usage is a function of the temperature. Therefore, the A/C usage calculated in MOBILE3 may vary from the value read.

3.2.12 Miscellaneous Data-Related Diagnostics

M88 "Excess data errors prevent further analysis"

This message should be the last of a list of 50 or more messages. The other messages should be analyzed to determine the problems causing the errors and corrected.

3.2.13 Internal Software Error Diagnostics

M01 "*** Error: Message code 'message code value' Unknown"

This message should only be printed when the message printing subroutine QUITER is passed an undefined message code value.

M60 "*** Error: 'default value of named function' default used for 'year' in function 'function name'"

This message indicates a default exit from a data point lookup function has been taken. One or more of the internally associated year/data pairs for 'function name' is in error. The program must be corrected and recompiled before another run.

M61 "*** Error: default used for 'year' in index function 'index function name'"

This message indicates a default exit has been taken from an index function. One or more of the associated year/years's position pairs is in error. The program must be corrected and recompiled before another run.

3.3 PROMPTING MESSAGES

If IPROMT=2 or IPROMT=4, the user is prompted for input data in the order required by MOBILE2. Prompting messages are written to unit 6 by default, unless the user redefines the prompting message unit (see Section 2.1.1). MOBILE3 does <u>not</u> prompt for the first record (IPROMT and IOUNEW assignment record), since IPROMT determines whether or not prompting will occur.

The prompt for each record type is described below. Refer to Chapter 2 for a detailed discussion of the prompted values.

3.3.1 CONTROL Section Prompts

3.3.1.1 Title Record Prompt

The title record for the MOBILE3 run is prompted for by:

"Enter project id:"

3.3.1.2 13 Remaining Flag Prompts

If IPROMT=2 (vertical format), the 13 remaining CONTROL SECTION flags are prompted for individually, with the prompts:

"Enter TAMFLG:"
"Enter SPDFLG:"
"Enter VMFLAG:"
"Enter MYMRFG:"
"Enter NEWFLG:"
"Enter IMFLAG:"
"Enter ALHFLG:"
"Enter ATPFLG:"
"Enter IFORM:"
"Enter PRTFLG:"
"Enter ICEVFG:"
"Enter IDLFLG:"
"Enter NMHFLG:"

If IPROMT=4 (horizontal format), the 13 remaining CONTROL SECTION flags are prompted for on one record with the single prompt:

"Enter TAMFLG, SPDFLG, VMFLAG, MYMRFG, NEWFLG, IMFLAG, ALHFLG, ATPFLG, IFORM, PRTFLG, ICEVFG, IDLFLG & NMHFLG"

3.3.2 ONE-TIME DATA Prompts

Prompts for ONE-TIME DATA have been updated where necessary to match MOBILE3 input requirements. The prompts for the new tampering rates records, the revised I/M program record and the new ATP record are shown here.

3.3.2.1 Tampering Rate Prompts

If TAMFLG=2, the replacement ZMLTAM and DRTAM are asked for by 1 of 2 pairs of prompts. IF IMFLAG=1, then:

"Enter tampering intercepts (zero-mile levels) for non-I/M case only:"
"Enter tampering slopes (deterioration rates) for non-I/M case only:"

If TAMFLG=2, then:

"Enter tampering intercepts (zero-mile levels) for non-I/M and I/M cases:"
"Enter tampering slopes (deterioration rates) for non-I/M and I/M cases:"

3.3.2.2 I/M Parameter Record Prompt

If IMFLAG=2, nine I/M parameters are prompted for by:

"Enter year I/M begins, stringency, m.t. flag,
first model year and last model year of prog. benefits,
vehicle, test type, cutpoints and newdata flags"

MOBILE3 does <u>not</u> prompt for the I/M credit data from unit 4.

3.3.2.3 Anti-Tampering Record Prompt

If ATPFLG=2, six anti-tampering parameters are required:

"Enter ATP start year, first & last years included,
and vehicle types covered (format = 3I2, 4I1):"

MOBILE3 does <u>not</u> prompt for the ATP effectiveness data from unit 3.

Chapter 4
MOBILE3 IMPLEMENTATION

4.0 INTRODUCTION

This chapter contains information on the MOBILE3 tape and other information that may be useful to users interested in the computer resource requirements of MOBILE3, to users implementing MOBILE3 on their own computer systems, and to users who are considering making some software changes.

4.1 MOBILE3 TAPE

The MOBILE3 tape issued by EPA contains four files. The first file is the MOBILE3 source code in mixed-case lettering (upper and lower) exactly the same output as illustrated in the MOBILE3 examples (Chapter 5). The second file is exactly the same as the first file except it is an uppercase lettered version with underscores replaced by hyphens. This second file has been provided in the event some systems have difficulty with lowercase characters or with underscores. The mixed-case version is more readable than the all-uppercase version.

The third file contains the anti-tampering program credit matrices which, with the assistance of EPA, can be used to simulate the effect on emissions of various kinds of anti-tampering programs. These credit matrices are duplicated in Appendix D, and an index to the credit matrices is found at the beginning of Appendix D.

The last file on the tape is a copy of the User's Guide examples in uppercase. These examples can be used to verify that MOBILE3 is operating properly when installed on a new system.

Other characteristics of the MOBILE3 tape are presented in Table 11.

Table 11
MOBILE3 Tape Characteristics

Density:	1600 bpi	Character Set:	EBCDIC
Blocking:	4000	Total Length:	168.33 feet
Record Length:	80	Unlabeled	

File Number	Description	Number of Records	Block Count	Tape Length (Feet)
1	MOBILE3 Source Code, Mixed-Case	13,039	261	68.81
2	MOBILE3 Source Code, Uppercase	13,039	261	68.81
3	ATP Credit Matrices	5,450	109	28.94
4	User's Guide Examples	380	6	1.78

4.2 PROGRAM STORAGE REQUIREMENTS

The variety of computers and system configurations in usc prohibits a precise statement of main storage requirements on each system. Nevertheless, the following should reflect the requirements of MOBILE3 on most systems.

	Kilobytes	32-bit memory words
Source Code	588	150,528
Object Code	300	76,800

The standard convention of 1 kilobyte = 1024 bytes is used. The values were obtained from the implementation of MOBILE3 on the University of Michigan Terminal System, based on an Amdahl 5860.

4.3 PROGRAM EXECUTION TIME

MOBILE3 requires more time to process scenario records than does MOBILE2. This was expected due primarily to the addition of the tampering offset code. Table 12 provides a comparison of the execution time required by MOBILE3 and MOBILE2 to process input data containing varying numbers of scenarios.

Table 12
Comparison of MOBILE3 and
MOBILE2 Execution Times

Number of Scenarios	Average Execution Time (CPU Seconds) MOBILE3	MOBILE2	M3/M2	Average Time per Scenario (CPU Seconds) MOBILE3	MOBILE2
1	0.232	0.168	1.38	0.226	0.172
2	0.323	0.185	1.74	0.161	0.092
10	1.092	0.580	1.88	0.109	0.058
20	2.045	1.071	1.91	0.102	0.054
50	4.942	2.591	1.91	0.099	0.052
250	24.330	12.529	1.94	0.097	0.050

The MOBILE3 flag settings for these benchmark runs are identical to those of Example 5.1.1 (all defaults) of Chapter 5. The equivalent settings were made for the MOBILE2 runs. The same first scenario of 5.1.1 was executed for the indicated number of times. These estimates were results from runs executed on an Amdahl 5860 computer. The average time per scenario statistic equals total execution time (not total scenario time) divided by the number of scenarios.

4.4 DEVIATIONS FROM FORTRAN STANDARD ANSI X3.9-1966

Users who wish to run MOBILE3 on other computers may need to change the program because of FORTRAN compiler incompatibilities. This section lists known deviations of MOBILE3 from the FORTRAN language standard ANSI X3.9-1966 published by the American National Standards Institute. Most conversion problems will be included in this list.

4.4.1 Array Dimensions

Some MOBILE3 arrays are defined to have four or five dimensions; the ANSI standard permits a maximum of three.

4.4.2 Character Data

Hollerith data is defined in MOBILE3 format statements by means of single quotation marks, while the ANSI standard requires use of the nH format specification.

MOBILE3 stores four characters in integer and real variables and array elements (A4 format) and eight characters in real*8 arrays. The ANSI standard only guarantees that one character can be stored in an integer or real variable (A1 format); therefore, MOBILE3 may be incompatible with some computer systems in this respect.

MOBILE3 assigns initial values of character data in integer data statements by means of single quotation marks. Again, the ANSI standard requires use of the nH format specification.

4.4.3 Array Data Initialization

MOBILE3 uses implied do-loops to initialize arrays in data statements. The ANSI standard requires that programs specify and initialize individual array elements. Each array element must be identified by means of an explicit subscript.

4.4.4 Nonstandard Characters

MOBILE3 uses some characters undefined in the ANSI standard. These include the single quotation mark('), double quotation mark("), pound sign (#), semicolon (;), and colon(:).

4.4.5 Input Error and End-of-File

MOBILE3 uses the ERR= option in READ statements to process input conversion errors and the END= option to process an end-of-file. Neither option is supported by the ANSI standard.

4.4.6 Comment Lines

MOBILE3 has comment lines interspersed with the continuation lines of data initialization statements. The ANSI standard states that comment lines may not be followed by continuation lines.

4.4.7 Multiple Subroutine Returns

MOBILE3 uses the alternate RETURN i feature in 8 subroutines. The ANSI standard does not support multiple returns from a subroutine.

4.5 TYPICAL JOB STRUCTURE

Since job control language (JCL) is highly system dependent this manual does not provide examples. The general requirements for running a job are outlined here. Most users should have little difficulty implementing JCL to perform similar functions.

The simplest job structure for most systems is illustrated below:

```
JCL to sign on the computer system
JCL to compile MOBILE3 FORTRAN source code
                .
                .
                .
     MOBILE3 FORTRAN source code
                .
                .
                .
JCL to assign MOBILE3 I/O, catalog (link edit), and run MOBILE3
                .
                .
                .
     MOBILE3 input data
                .
                .
                .
```

MOBILE3 uses I/O device numbers stored in common IOUCOM. MOBILE3 I/O device assignments are:

3 = user supplied anti-tampering program (ATP) effectiveness rates (IOUAER)
4 = user supplied inspection/maintenance (I/M) credits (IOUIMD)
5 = general input data (IOUGEN)
6 = formatted reports (IOUREP)
6 = diagnostic messages (IOUERR)
6 = input prompting messages (IOUASK)

Users can change these device numbers by modifying source code data statements initializing common IOUCOM in Block Data Subprogram 14. Output devices only can also be changed by assigning replacement numbers to IOUNEW on line 1 of the CONTROL Section as shown in Table 7 in Chapter 2.

The job structure illustrated above does not read user-supplied I/M credits or ATP credit matrices. Users can read I/M credits or ATP credit matrices by entering the data from another I/O device such as a disk file or magnetic tape. Alternately, users can merge the credits or rates with other input and change the I/M or ATP input device number from 3 or 4, respectively, to 5. Another useful change (especially for IFORM = 1 or 2) might alter IOUREP from 6 to some other unused unit number via IOUNEW. Again, see Table 7 in Chapter 2.

4.6 POSSIBLE PROGRAM CHANGES

This section describes some of the more common changes that users might make to their copy of the MOBILE3 program.

The changes mentioned here are suggestions for: (a) user convenience (multiple CONTROL Sections, hardcoding locality-specific data), (b) program enhancements (single record numeric output, evaluation of intermediate altitude emission factors), and (c) reducing computer resource requirements.

4.6.1 Multiple CONTROL Sections

The control flags and ONE-TIME DATA are input exactly once into MOBILE3. Since these values once read in cannot be altered, users must make multiple runs of MOBILE3 if they want to change values of control flags or ONE-TIME DATA. Multiple runs incur the additional overhead of loading the program each time and can be inconvenient to the user. Because of this, the user may want to change MOBILE3 to be capable of "starting over" with a new input stream upon some input cue. One method of doing this is described below. This approach has not been completely verified.

New CONTROL Sections would be entered after MOBILE3 has read one or more scenarios. Therefore, it is necessary to find a way of indicating that the program is to stop reading scenario records and begin reading CONTROL records. A simple way of doing this is to modify the program to look for a special value in the scenario record. For example, a literal value of "FLAG" could be used in columns 77 - 80.

Users would need to add a statement to subroutine PARSEC immediately following the statements that read scenario records. This statement would cause a subroutine exit if the special value were found.

The MAIN program would also need to be modified. Users would need to identify the "FLAG" return from PARSEC (by alternate return code or by a check after the PARSEC CALL statement) and branch back to the beginning of MAIN.

We do not know whether repeating initialization steps causes problems. Users must determine this for themselves. Users should realize that new CONTROL Section data modifies all previous CONTROL Section data. MOBILE3 does not revert to an original ("clean") version whenever new CONTROL Section data are entered (for example, user supplied mileage accrual, registration, or alternate emission rates remain and replace the MOBILE3 values).

4.6.2 Hardcoding Locality Specific Data

Users who plan to run a very large number of MOBILE3 data sets, and who wish to override the MOBILE3 default conditions with their own locality specific data in each data set, could consider modifying the BLOCK DATA routines and replacing the MOBILE3 data with their own data.

4.6.3 Single (Long) Record Numeric Output

Users may wish to print a single line of numeric output to a file or tape. This can be done by setting the report format code IFORM to 2 and changing subroutine OUTDT2. The slash '/' carriage controls must be deleted from format statements 200 and 210. The line table identifiers 'A', 'B', and 'C' are no longer needed and can be deleted from the format statements.

The column headers for OUTDT2 are printed by subroutine OUTHD2. Of course, these will no longer line up with the columns if users change OUTDT2. Users can delete the OUTHD2 call from OUTPUT if the column headers are not desired. Alternatively, with a little more effort, users can change the OUTHD2 header formats.

If this method is used to print a single line of numeric output, each line will exceed 132 characters (to about 200, depending on the specific changes).

4.6.4 Intermediate Altitude

Users who wish to model conditions at altitudes other than the standard 500 ft. low altitude or 5500 ft. high altitude conditions may alter the program to do so. The program is already set up to do much of the work. Intermediate altitude is handled as follows:

1. The user inputs '3' as the region on the scenario record. MOBILE3 allows this and expects the next record to contain the altitude in an F6.0 format.

2. The altitude must be between 1500 ft. and 10,000 feet. Less than 1500 feet is considered "low altitude", for modeling purposes.

3. Subroutine EFCALX will then calculate emission rates for both low and high altitude. The user must modify EFCALX by deleting the QUITER call at statement 30 and adding there the intermediate altitude calculation methodology. EPA has not yet evaluated what this methodology should be.

4. The output routines do not need to be modified.

4.6.5 Reducing Computer Resource Requirements

Users who wish to reduce MOBILE3's memory requirements can do so by removing arrays, or portions of arrays which are not useful for their specific analyses.

The most significant reductions are:

1. Eliminate an unnecessary region. Many of the arrays contain data for two regions (low altitude and high altitude). Users not requiring both regions could eliminate the "region" dimension of the arrays, delete corresponding portions of the BLOCK DATA routines, and make appropriate indexing changes.

2. Eliminate I/M credits. Users who do not need to include I/M effects in their analyses can eliminate BLOCK DATA's 6 and 7 (9,994 integer values), the common areas and routines PCLEFT and GETIMC.

   A less drastic reduction can be made by eliminating unneeded portions of the I/M credit arrays.

3. Any other unneeded arrays, or portions thereof, could be eliminated.

4. Use halfword integer arrays. All the integer arrays in COMMON areas are fullword integers. This is because halfword integers, or INTEGER*2, are not an ANSI FORTRAN standard. We wanted MOBILE3 to be compatible with as many systems as possible. These integer arrays contain over 4,800 words of either 1-digit pointers or flags or 4-digit model years. If the user has the halfword option available, and if the user's word length is such that a halfword can store a 4-digit integer, then changing the integer arrays from fullwords to halfwords can recover over 2,400 words of memory.

Users who wish to reduce the running time of MOBILE3 can do so in the following manners:

1. To reduce the overhead associated with subroutine calls, routines which are called from only one or two places could be deleted and their logic moved in-line into the calling routine. This is particularly true of the pointer functions, which typically contain very few lines of code. Examples are:

a. The logic of IERPTR could be moved into routines EFCALX and NEWERQ.

b. CCEVRT could contain the logic of HOTSOK, CRANKC, DIURNL, XMPD, and TPD.

c. BEF and BEFIDL could be placed in-line in EFCALX

d. BEF could check for the necessity of calling PCLEFT. (check IMFLAG, etc.).

e. IGLPTR, IGTPTR, IGEPTR, IGUPTR could be placed in ALUH.

f. ISPPTR, ISPPT8, IGPPTR could be coded in BIGCFX.

2. Any or all multidimensional arrays may be converted to single dimensional arrays in the executable code (not necessarily in the block data subprograms). For any converted array, the user must then compute the required subscript to extract the correct data value. This method gains little, if any, run time when the available FORTRAN compiler globally optimizes code.

3. If the user typically runs MOBILE3 with the PRTFLG value less than 4 (to select only one pollutant to output), then the computational logic could be changed to evaluate only the selected pollutant. Currently all pollutants are evaluated. Approximately 15-20% of the total run time is expended to evaluate one pollutant.

4. Computational code may be converted to assembly language mnemonics with an extended FORTRAN which permits an in-line assembly drop-in to be interspersed with the ordinary FORTRAN statements. Depending on the optimizing capabilities of the available FORTRAN compiler, this method can reduce the run time by 10% to 50%.

5. The user could tailor the program to a specific usage, eliminating unneeded options and modifying input and output. The consideration of hard-coding locality specific data has already been mentioned.

4.7 PROGRAM UPDATE INFORMATION

The EPA expects MOBILE3 to undergo future revision to correct any possible errors, improve program performance, and incorporate changes in the methodology. Users who wish to submit changes or corrections can mail these to the EPA Motor Vehicle Emission Laboratory in Ann Arbor at the address given at the end of this section.

A list of program errors and User's Guide corrections will be compiled if necessary and distributed to EPA Regional offices. We do not currently intend to support a user mailing list for automatic distribution of these corrections. Users should contact their regional offices from time to time. Users, who wish to do so, may submit the following Update Request form. In the event a complete mailing list is assembled, they will be included and sent any published changes to MOBILE3.

MOBILE3 UPDATE REQUEST

Mail to:

MOBILE3
Office of Mobile Sources
Emission Control Technology Division
Test and Evaluation Branch
2565 Plymouth Road
Ann Arbor, Michigan 48105

Name and Address of User:

_____

_____

_____

_____

CITY _____ STATE _____

ZIP _____

Name and telephone numbers of individual(s) we may need to reach to respond to questions:

_____

_____

_____

_____

_____

Chapter 5
MOBILE3 EXAMPLES

5.0 INTRODUCTION

Six examples have been provided which illustrate various aspects of MOBILE3. The user is encouraged to try two or more of these examples to ensure that the model as compiled is running properly.

5.1 EXAMPLES

The MOBILE3 examples are summarized in Table 13.

Table 13
MOBILE3 Examples

Example #	Title	Content
1	Basic Run	Basic fleet emission rates evaluated in 1/1/80, 1/1/88, 1/1/90.
2	Alternate Tampering Rates	Fleet emission rates with alternate (zero) tampering rates, evaluated in 1/1/80, 1/1/88, and 1/1/90.
3	I/M	An I/M program implemented in 1/1/83 and evaluated in 1/1/80 and 1/1/88.
4	ATP	An anti-tampering program, implemented in 1/1/84 and evaluated in 1/1/80 and 1/1/88.
5	I/M + ATP	Anti-tampering and I/M programs, evaluated in 1/1/80, 1/1/88 and 1/1/95.
6	Replacement of MOBILE3 Data	Other user options are selected to illustrate difference in data echoing between MOBILE2 and MOBILE3.

5.1.1 Basic Run Example

This example is a basic MOBILE3 run which reflects "national average" emission rates without I/M or an ATP. The user should note that each scenario output section includes information on whether I/M or an ATP has been included, and other information such as temperature and operating mode percentages.

5.1.2 Alternate Tampering Rates Example

This example illustrates the input of alternate tampering rates into the ONE-TIME DATA section. TAMFLG has been set to the value of 2. The first four records in ONE-TIME DATA are the tampering frequency zero-mile levels, the second four records are the increases in tampering rates per 10K miles. These tampering rates have been echoed back by the program in the run header. Note that each scenario output section also states that alternate rates have been used.

5.1.3 I/M Program Example

This example illustrates the use of a control file which estimates the impact of an I/M program. The I/M program characteristics are summarized at the top of the run header. Note that the scenarios are now echoing the fact that I/M is being accounted for in estimating emission rates.

5.1.4 ATP Example

This fourth example shows how an anti-tampering program run is set-up on the control file. ATPFLG is now set at 2, while alternate effectiveness matrices (ATP credits) are read from unit 3. The ATP parameter record must also be specified following NMHFLG.

5.1.5 I/M and ATP Combination Example

This example illustrates the use of a control file which activates both I/M and an ATP. Note that both the I/M and ATP parameters must be specified, and that alternate effectiveness matrices must be read in from unit 3. All parameters and the effectiveness matrices are echoed back in the run header for verification.

5.1.6 Replacement of MOBILE3 Data Example

This example illustrates a MOBILE3 run in which every control flag except ATPFLG is activated. The warning messages printed differ from those discussed in the User's Guide to MOBILE2 only in being in mixed case letters.

```
1                                                                IPROMT
MOBILE3 Example #1: Basic Run (All Defaults, ICY = 80, 88 & 90)
1                                                                TAMFLG
1                                                                SPDFLG
1                                                                VMFLAG
1                                                                MYMRFG
1                                                                NEWFLG
1                                                                IMFLAG
1                                                                ALHFLG
1                                                                ATPFLG
3                                                                IFORM
4                                                                PRTFLG
1                                                                ICEVFG
1                                                                IDLFLG
1                                                                NMHFLG
1 80 19.6 75.0 20.6 27.3 20.6                                    Scenario
1 88 19.6 75.0 20.6 27.3 20.6                                    Scenario
1 90 19.6 75.0 20.6 27.3 20.6                                    Scenario
```

MOBILE3 Example #1: Basic Run (All Defaults, ICY = 80, 88 & 90)

Total HC emission factors include evaporative HC emission factors.

Cal. Year: 1980 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.666	0.133	0.088		0.040	0.005	0.001	0.060	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	5.74	7.68	12.34	9.53	17.44	0.49	1.01	5.30	8.35	7.01
Exhaust CO:	45.75	58.52	76.70	65.75	175.34	1.30	2.16	15.01	29.51	53.13
Exhaust NOX:	2.88	3.37	4.82	3.95	6.56	1.46	1.98	24.91	0.49	4.57

Cal. Year: 1988 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.643	0.121	0.087		0.041	0.036	0.015	0.050	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.65	4.96	5.91	5.36	8.75	0.40	0.62	3.94	6.02	3.44
Exhaust CO:	21.20	39.29	43.37	40.99	91.06	1.32	1.53	11.63	19.81	26.65
Exhaust NOX:	1.69	3.08	3.39	3.21	5.32	1.17	1.45	17.74	0.85	2.93

Cal. Year: 1990 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.635	0.115	0.086		0.041	0.046	0.021	0.049	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.28	4.42	5.01	4.67	6.95	0.40	0.62	3.51	6.01	2.92
Exhaust CO:	18.44	34.84	37.39	35.93	66.48	1.32	1.53	11.11	19.73	22.43
Exhaust NOX:	1.57	2.89	3.10	2.98	5.38	1.10	1.28	15.22	0.85	2.64

```
1                                                                  IPROMT
MOBILE3 Example #2: Alternate Tampering Rates (All Zeroes, ICY = 80, 88 & 90)
2                                                                  TAMFLG: 2 = read in ZML and DET from 1-time data.
1                                                                  SPDFLG
1                                                                  VMFLAG
1                                                                  MYMRFG
1                                                                  NEWFLG
1                                                                  IMFLAG: 1 = no I/M = read in only non-I/M ZML and DRTAM.
1                                                                  ALHFLG
1                                                                  ATPFLG
3                                                                  IFORM
4                                                                  PRTFLG
1                                                                  ICEVFG
1                                                                  IDLFLG
1                                                                  NMHFLG
   .0000   .0000   .0000   .0000   .0000   .0000   .0000          ZMLTAM.LDGV..no I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                .LDGT1.no I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                .LDGT2.no I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                .HDGV..no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000  DRTAM..LDGV..no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000          .LDGT1.no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000          .LDGT2.no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000          .HDGV..no I/M
1 80 19.6 75.0 20.6 27.3 20.6                                      Scenario
1 88 19.6 75.0 20.6 27.3 20.6                                      Scenario
1 90 19.6 75.0 20.6 27.3 20.6                                      Scenario
```

MOBILE3 Example #2: Alternate Tampering Rates (All Zeroes, ICY = 80, 88 & 90)

Replacement Tampering and Misfueling Rates Input by User:

Non-I/M Case

Component	LDGV ZML	LDGV DET	LDGT1 ZML	LDGT1 DET	LDGT2 ZML	LDGT2 DET	HDGV ZML	HDGV DET
Air Pump	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Catalyst	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Inlet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Misfueling	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EGR System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Evap Canister	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCV System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Total HC emission factors include evaporative HC emission factors.

User supplied tampering and misfueling rates.

Cal. Year: 1980 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.666	0.133	0.088		0.040	0.005	0.001	0.060	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	5.55	6.99	12.01	8.98	17.20	0.49	1.01	5.30	8.35	6.75
Exhaust CO:	44.25	53.98	75.59	62.58	175.34	1.30	2.16	15.01	29.51	51.43
Exhaust NOX:	2.77	3.07	4.73	3.73	6.56	1.46	1.98	24.91	0.49	4.44

User supplied tampering and misfueling rates.

Cal. Year: 1988 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.643	0.121	0.087		0.041	0.036	0.015	0.050	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.27	3.76	4.84	4.21	8.28	0.40	0.62	3.94	6.02	2.94
Exhaust CO:	17.88	29.87	35.48	32.21	89.97	1.32	1.53	11.63	19.81	22.64
Exhaust NOX:	1.37	2.31	2.76	2.50	5.26	1.17	1.45	17.74	0.85	2.57

User supplied tampering and misfueling rates.

Cal. Year: 1990 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.635	0.115	0.086		0.041	0.046	0.021	0.049	0.007	

Composite Emission Factors (Gm/Mile)

Total HC:	1.90	3.21	3.88	3.50	6.21	0.40	0.62	3.51	6.01	2.41
Exhaust CO:	15.14	25.10	28.75	26.66	63.31	1.32	1.53	11.11	19.73	18.34
Exhaust NOX:	1.23	2.04	2.35	2.17	5.17	1.10	1.28	15.22	0.85	2.25

```
1                                                          IPROMT
MOBILE3 Example #3: I/M Program (Default Credits, ICYIM = 83, ICY = 80 & 88)
1                                                          TAMFLG
1                                                          SPDFLG
1                                                          VMFLAG
1                                                          MYMRFG
1                                                          NEWFLG
2                                                          IMFLAG
1                                                          ALHFLG
1                                                          ATPFLG
3                                                          IFORM
4                                                          PRTFLG
1                                                          ICEVFG
1                                                          IDLFLG
1                                                          NMHFLG
83 20 1 51 20 1 1 2 1                                      I/M parameters
1 80 19.6 75.0 20.6 27.3 20.6                              Scenario
1 88 19.6 75.0 20.6 27.3 20.6                              Scenario
```

MOBILE3 Example #3: I/M Program (Default Credits, ICYIM = 83, ICY = 80 & 88)

I/M program selected:

Start year (January 1):	1983
Pre-1981 MYR stringency rate:	20%
Mechanic training program?:	No
First model year covered:	1951
Last model year covered:	2020
Vehicle types covered:	LDGV
1981 & later MYR test type:	Idle
1981 & later MYR test cutpoints:	1.2% ICO / 220 ppm IHC

Total HC emission factors include evaporative HC emission factors.

Cal. Year: 1980 I/M Program: Yes Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.666	0.133	0.088		0.040	0.005	0.001	0.060	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	5.74	7.68	12.34	9.53	17.44	0.49	1.01	5.30	8.35	7.01
Exhaust CO:	45.75	58.52	76.70	65.75	175.34	1.30	2.16	15.01	29.51	53.13
Exhaust NOX:	2.88	3.37	4.82	3.95	6.56	1.46	1.38	24.91	0.49	4.57

Cal. Year: 1988 I/M Program: Yes Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.643	0.121	0.087		0.041	0.036	0.015	0.050	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.23	4.96	5.91	5.36	8.75	0.40	0.62	3.94	6.02	3.17
Exhaust CO:	13.92	39.29	43.37	40.99	91.06	1.32	1.53	11.63	19.81	21.96
Exhaust NOX:	1.56	3.08	3.39	3.21	5.32	1.17	1.45	17.74	0.85	2.85

```
1                                                                IPROMT
MOBILE3 Example #4: Anti-tampering Program (no I/M, Start = 84, ICY = 80 & 88)
1                                                                TAMFLG
1                                                                SPDFLG
1                                                                VMFLAG
1                                                                MYMRFG
1                                                                NEWFLG
1                                                                IMFLAG
2                                                                ALHFLG
3                                                                ATPFLG: 2 = read ATP parameter card + unit 3 AER matrix file.
4                                                                IFORM
1                                                                PRTFLG
1                                                                ICEVFG
1                                                                IDLFLG
84 75 20 2111                                                    NMHFLG
1 80 19.6 75.0 20.6 27.3 20.6                                    ATP parameters: start, 1st myr, last myr, veh types
1 88 19.6 75.0 20.6 27.3 20.6                                    Scenario
                                                                 Scenario
```

7

```
*****************************************************************************
*                                                                           *
*      Annual: Inspect in non-I/M areas only air pump, catalyst,            *
*              fuel inlet (not with plumbtesmo), pcv and                    *
*              evaporative canister.                                        *
*                                                                           *
*****************************************************************************
 0.57 0.56 0.57 0.56
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   EVAP/PCV
  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00   AIR/CAT  (PREVIOUS)
  .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00   AIR/NCK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00   AIR/TNK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00   AIR/CAT/NCK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00   AIR/CAT/TNK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00   CAT/NCK
 0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00   AIR
  .00 0.63  .00 0.47  .00 0.62  .00  .00  .00 0.83  .00   CAT
  .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00   NCK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   TNK
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/CAT  (PREVIOUS)
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/NCK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00   EGR/TNK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00   EGR/CAT/NCK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00   EGR/CAT/TNK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00   CAT/NCK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00   EGR
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00   CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00   NCK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   TNK
  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00   AIR/CAT  (PREVIOUS)
  .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00   AIR/NCK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00   AIR/TNK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00   AIR/CAT/NCK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00   AIR/CAT/TNK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00   CAT/NCK
 0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00   AIR
  .00 0.50  .00 0.50  .00 0.65  .00  .00  .00 0.70  .00   CAT
  .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00   NCK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   TNK
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/CAT  (SUBSEQUENT)
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/NCK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00   EGR/TNK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00   EGR/CAT/NCK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00   EGR/CAT/TNK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00   CAT/NCK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00   EGR
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00   CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00   NCK
```

MOBILE3 Example #4: Anti-tampering Program (no I/M, Start = 84, ICY = 80 & 88)

Anti-tampering program selected:

Start year (January 1): 1984
First model year covered: 1975
Last model year covered: 2020
Vehicle types covered: LDGV

```
*****************************************************************************
*                                                                           *
*     Annual: Inspect in non-I/M areas only air pump, catalyst,             *
*             fuel inlet (not with plumbtesmo), pcv and                     *
*             evaporative canister.                                         *
*                                                                           *
*****************************************************************************
```

Total HC emission factors include evaporative HC emission factors.

Cal. Year: 1980 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: Yes Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.666	0.133	0.088		0.040	0.005	0.001	0.060	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	5.74	7.68	12.34	9.53	17.44	0.49	1.01	5.30	8.35	7.01
Exhaust CO:	45.75	58.52	76.70	65.75	175.34	1.30	2.16	15.01	29.51	53.13
Exhaust NOX:	2.88	3.37	4.82	3.95	6.56	1.46	1.98	24.91	0.49	4.57

Cal. Year: 1988 I/M Program: No Ambient Temp: 75.0 (F) Region: Low
Anti-tam. Program: Yes Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.643	0.121	0.087		0.041	0.036	0.015	0.050	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.52	4.96	5.91	5.36	8.75	0.40	0.62	3.94	6.02	3.35
Exhaust CO:	19.70	39.29	43.37	40.99	91.06	1.32	1.53	11.63	19.81	25.68
Exhaust NOX:	1.69	3.08	3.39	3.21	5.32	1.17	1.45	17.74	0.85	2.93

```
1                                                                IPROMT
MOBILE3 Example #5: Anti-tampering Program (I/M, Start = 84, ICY = 80, 88, 95)
1                                                                TAMFLG
1                                                                SPDFLG
1                                                                VMFLAG
1                                                                MYMRFG
2                                                                NEWFLG
1                                                                IMFLAG
2                                                                ALHFLG
3                                                                ATPFLG: 2 = read ATP parameter card + unit 3 AER matrix file.
4                                                                IFORM
1                                                                PRTFLG
1                                                                ICEVFG
1                                                                IDLFLG
83 30 1 68 20 4 2 2 1                                            NMHFLG
84 84 20 2221                                                    I/M parameters
1 80 19.6 75.0 20.6 27.3 20.6                                    ATP parameters: start, 1st myr, last myr, veh types
1 88 19.6 75.0 20.6 27.3 20.6                                    Scenario
1 95 19.6 75.0 20.6 27.3 20.6                                    Scenario
                                                                 Scenario
```

```
7
*****************************************************************************
*                                                                           *
*      Annual: Inspect in I/M areas only air pump, catalyst, fuel           *
*              inlet (not with plumbtesmo), pcv and evaporative             *
*              canister.                                                    *
*                                                                           *
*****************************************************************************
 0.57 0.56 0.57 0.56
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   EVAP/PCV
  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00   AIR/CAT  (PREVIOUS)
  .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00   AIR/NCK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00   AIR/TNK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00   AIR/CAT/NCK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00   AIR/CAT/TNK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00   CAT/NCK
 0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00   AIR
  .00 0.47  .00 0.21  .00 0.36  .00  .00  .00 0.67  .00   CAT
  .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00   NCK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   TNK
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/CAT  (PREVIOUS)
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/NCK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00   EGR/TNK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00   EGR/CAT/NCK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00   EGR/CAT/TNK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00   CAT/NCK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00   EGR
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00   CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00   NCK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   TNK
  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00   AIR/CAT  (SUBSEQUENT)
  .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00   AIR/NCK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00   AIR/TNK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00   AIR/CAT/NCK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00   AIR/CAT/TNK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00   CAT/NCK
 0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00   AIR
  .00 0.10  .00 0.10  .00 0.25  .00  .00  .00 0.30  .00   CAT
  .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00   NCK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00   TNK
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/CAT  (SUBSEQUENT)
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00   EGR/NCK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00   EGR/TNK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00   EGR/CAT/NCK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00   EGR/CAT/TNK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00   CAT/NCK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00   CAT/TNK
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00   EGR
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00   CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00   NCK
```

MOBILE3 Example #5: Anti-tampering Program (I/M, Start = 84, ICY = 80, 88, 95)

I/M program selected:

Start year (January 1):	1983
Pre-1981 MYR stringency rate:	30%
Mechanic training program?:	No
First model year covered:	1968
Last model year covered:	2020
Vehicle types covered:	LDGV, LDGT1, LDGT2
1981 & later MYR test type:	2500 rpm / Idle
1981 & later MYR test cutpoints:	1.2% ICO / 220 ppm IHC

Anti-tampering program selected:

Start year (January 1):	1984
First model year covered:	1984
Last model year covered:	2020
Vehicle types covered:	LDGV , LDGT1, LDGT2

```
*****************************************************************************
*                                                                           *
*      Annual: Inspect in I/M areas only air pump, catalyst, fuel           *
*              inlet (not with plumbtesmo), pcv and evaporative             *
*              canister.                                                    *
*                                                                           *
*****************************************************************************
```

Total HC emission factors include evaporative HC emission factors.

Cal. Year: 1980 — I/M Program: Yes — Anti-tam. Program: Yes — Ambient Temp: 75.0 (F) — Operating Mode: 20.6 / 27.3 / 20.6 — Region: Low — Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.666	0.133	0.088		0.040	0.005	0.001	0.060	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	5.74	7.68	12.34	9.53	17.44	0.49	1.01	5.30	8.35	7.01
Exhaust CO:	45.75	58.52	76.70	65.75	175.34	1.30	2.16	15.01	29.51	53.13
Exhaust NOX:	2.88	3.37	4.82	3.95	6.56	1.46	1.98	24.91	0.49	4.57

Cal. Year: 1988 — I/M Program: Yes — Anti-tam. Program: Yes — Ambient Temp: 75.0 (F) — Operating Mode: 20.6 / 27.3 / 20.6 — Region: Low — Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.643	0.121	0.087		0.041	0.036	0.015	0.050	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	2.15	3.86	4.84	4.27	8.75	0.40	0.62	3.94	6.02	2.89
Exhaust CO:	12.83	23.04	24.38	23.60	91.06	1.32	1.53	11.63	19.81	17.65
Exhaust NOX:	1.56	2.72	3.05	2.86	5.32	1.17	1.45	17.74	0.85	2.78

Cal. Year: 1995 — I/M Program: Yes — Anti-tam. Program: Yes — Ambient Temp: 75.0 (F) — Operating Mode: 20.6 / 27.3 / 20.6 — Region: Low — Altitude: 500. Ft.

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		19.6	19.6	19.6	19.6	19.6	
VMT Mix:	0.617	0.102	0.086		0.041	0.067	0.035	0.045	0.007	
Composite Emission Factors (Gm/Mile)										
Total HC:	1.29	2.14	2.23	2.18	5.11	0.41	0.66	2.99	6.01	1.64
Exhaust CO:	8.26	12.97	13.15	13.05	37.53	1.34	1.56	10.44	19.73	9.85
Exhaust NOX:	1.24	1.91	1.97	1.93	5.52	1.03	1.17	12.76	0.85	2.05

```
1                                                                  IPROMT
MOBILE3 Example #6: User Replaces MOBILE3 Data (I/M, ICY = 80, 95 & 15)
2                                                                  TAMFLG
2                                                                  SPDFLG
2                                                                  VMFLAG
3                                                                  MYMRFG
2                                                                  NEWFLG
2                                                                  IMFLAG
3                                                                  ALHFLG
1                                                                  ATPFLG
3                                                                  IFORM
4                                                                  PRTFLG
3                                                                  ICEVFG
2                                                                  IDLFLG
2                                                                  NMHFLG
   .0000   .0000   .0000   .0000   .0000   .0000   .0000          ZMLTAM.LDGV..no I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                  .I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                .LDGT1.no I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                  .I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                .LDGT2.no I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                  .I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                .HDGV..no I/M
   .0000   .0000   .0000   .0000   .0000   .0000   .0000                  .I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000  DRTAM..LDGV..no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000                  .I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000                .LDGT1.no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000                  .I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000                .LDGT2.no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000                  .I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000                .HDGV..no I/M
   .00000  .00000  .00000  .00000  .00000  .00000  .00000                  .I/M
 .075 .107 .107 .106 .100 .092 .085 .077 .066 .052                JULMYR.LDGV..my ages 1-10
 .039 .027 .018 .014 .009 .006 .005 .005 .005 .004                      .LDGV..my ages 11-20
 .061 .095 .094 .103 .083 .076 .076 .063 .054 .043                      .LDGT1.my ages 1-10
 .036 .024 .030 .028 .026 .024 .022 .020 .018 .016                      .LDGT1.my ages 11-20
 .037 .070 .078 .086 .075 .075 .075 .068 .059 .053                      .LDGT2.my ages 1-10
 .044 .032 .038 .036 .034 .032 .030 .028 .026 .024                      .LDGT2.my ages 11-20
 .037 .070 .078 .086 .075 .075 .075 .068 .059 .053                      .HDGV..my ages 1-10
 .044 .032 .038 .036 .034 .032 .030 .028 .026 .024                      .HDGV..my ages 11-20
 .075 .107 .107 .106 .100 .092 .085 .077 .066 .052                      .LDDV..my ages 1-10
 .039 .027 .018 .014 .009 .006 .005 .005 .005 .004                      .LDDV..my ages 11-20
 .061 .095 .094 .103 .083 .076 .076 .063 .054 .043                      .LDDT..my ages 1-10
 .036 .024 .030 .028 .026 .024 .022 .020 .018 .016                      .LDDT..my ages 11-20
 .077 .135 .134 .131 .099 .090 .082 .062 .045 .033                      .HDDV..my ages 1-10
 .025 .015 .013 .011 .010 .008 .007 .006 .005 .004                      .HDDV..my ages 11-20
 .105 .225 .206 .149 .097 .062 .046 .033 .029 .023                      .MC....my ages 1-10
 .008 .005 .013 .000 .000 .000 .000 .000 .000 .000                      .MC....my ages 11-20
 8                                                                 # of new exhaust basic emission rates (ber) to be entered
1 1 1 80 82   1.13   0.23                                           New ber specifications
1 1 1 83 95   0.13   0.46                                           New ber specifications
1 1 2 80 80  18.60   2.80                                           New ber specifications
1 1 2 81 85   2.10   3.00                                           New ber specifications
1 5 1 80 82   1.13   0.23                                           New ber specifications
1 5 1 83 95   0.13   0.46                                           New ber specifications
1 5 2 80 80  18.60   2.80                                           New ber specifications
1 5 2 81 85   2.10   3.00                                           New ber specifications
83 30 1 68 20 4 2 2 1                                              I/M parameters
  3.3  3.3  3.3 10.9  3.3  3.3  7.5  3.2                           Average trips per day for each of 8 vehicle types
 29.4 29.4 29.4 63.6 29.4 29.4 63.6 16.7                           Average miles per day for each of 8 vehicle types
1 80 19.6 19.6 19.6 16.0 19.6 19.6 16.0 19.6 81.0 20.6 27.3 20.6 Scenario (includes 8 average vehicle speeds)
```

```
.657.083.057.100.015.070.009.009
0.40 .08 .12 .14 .09 .09 .09 83. 90. 75.                                  Scenario's vmt mix
1 95 19.6 19.6 19.6 16.0 19.6 19.6 16.0 19.6 81.0 20.6 27.3 20.6           Scenario's additional correction factors parameters
.657.083.057.100.015.070.009.009                                          Scenario (includes 8 average vehicle speeds)
0.40 .08 .12 .14 .09 .09 .09 83. 90. 75.                                  Scenario's vmt mix
1 15 19.6 19.6 19.6 16.0 19.6 19.6 16.0 19.6 81.0 20.6 27.3 20.6           Scenario's additional correction factors parameters
.657.083.057.100.015.070.009.009                                          Scenario (includes 8 average vehicle speeds)
0.40 .08 .12 .14 .09 .09 .09 83. 90. 75.                                  Scenario's vmt mix
                                                                          Scenario's additional correction factors parameters
```

```
Warning:  0.999      MYR sum not = 1. (will normalize)
Warning:  0.992      MYR sum not = 1. (will normalize)
Warning:  0.999      MYR sum not = 1. (will normalize)
Warning:  0.992      MYR sum not = 1. (will normalize)
Warning:  0.992      MYR sum not = 1. (will normalize)
Warning:   1.00      MYR sum not = 1. (will normalize)
Warning:  0.500E-02 registration with zero mileage
Warning:  0.130E-01 registration with zero mileage
Warning: equation  1 zeroes all idle coefficients (and total) for IR=1, IV=1, IP=1
Warning: equation  2 zeroes all idle coefficients (and total) for IR=1, IV=1, IP=1
Warning: equation  3 zeroes all idle coefficients (and total) for IR=1, IV=1, IP=2
Warning: equation  4 zeroes all idle coefficients (and total) for IR=1, IV=1, IP=2
Warning: equation  5 zeroes all idle coefficients (and total) for IR=1, IV=5, IP=1
Warning: equation  6 zeroes all idle coefficients (and total) for IR=1, IV=5, IP=1
Warning: equation  7 zeroes all idle coefficients (and total) for IR=1, IV=5, IP=2
Warning: equation  8 zeroes all idle coefficients (and total) for IR=1, IV=5, IP=2
Comment: A/C correction factor will be calculated.
         Value of inputted AC usage parameter is ignored.
```

MOBILE3 Example #6: User Replaces MOBILE3 Data (I/M, ICY = 80, 95 & 15)

Replacement Tampering and Misfueling Rates Input by User:

Non-I/M Case

Component	LDGV ZML	LDGV DET	LDGT1 ZML	LDGT1 DET	LDGT2 ZML	LDGT2 DET	HDGV ZML	HDGV DET
Air Pump	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Catalyst	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Inlet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Misfueling	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EGR System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Evap Canister	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCV System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

I/M Case

Component	LDGV ZML	LDGV DET	LDGT1 ZML	LDGT1 DET	LDGT2 ZML	LDGT2 DET	HDGV ZML	HDGV DET
Air Pump	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Catalyst	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Inlet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Misfueling	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EGR System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Evap Canister	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCV System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Emission Factor Modification Profile

Region	Veh.	Pollutant	First MY	Last MY	Base	DR	Altered
1	1	1	1980	1982	1.13	0.23	Yes
1	1	1	1983	1995	0.13	0.46	Yes
1	1	2	1980	1980	18.60	2.80	Yes
1	1	2	1981	1985	2.10	3.00	Yes
1	5	1	1980	1982	1.13	0.23	Yes
1	5	1	1983	1995	0.13	0.46	Yes
1	5	2	1980	1980	18.60	2.80	Yes
1	5	2	1981	1985	2.10	3.00	Yes

I/M program selected:

Start year (January 1):	1983
Pre-1981 MYR stringency rate:	30%
Mechanic training program?:	No
First model year covered:	1968
Last model year covered:	2020
Vehicle types covered:	LDGV, LDGT1, LDGT2
1981 & later MYR test type:	2500 rpm / Idle
1981 & later MYR test cutpoints:	1.2% ICO / 220 ppm IHC

Non-methane HC emission factors include evaporative HC emission factors.

User supplied tampering and misfueling rates, basic exhaust emissions rates, veh registration distributions.

Cal. Year: 1980 I/M Program: Yes Ambient Temp: 81.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.
Absolute Humidity: 83.00 AC (DB / WB): 1.0 (90.0 / 75.0)

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		16.0	19.6	19.6	16.0	19.6	
VMT Mix:	0.657	0.083	0.057		0.100	0.015	0.070	0.009	0.009	
Extra Load:	0.080	0.120	0.140							
Trlr in Tow:	0.090	0.090	0.090							
Composite Emission Factors (Gm/Mile)										
Non-Meth HC:	5.33	6.50	13.54	9.37	20.49	0.62	0.99	5.93	7.01	7.06
Exhaust CO:	59.51	71.01	98.49	82.20	270.37	4.07	2.17	18.35	27.95	78.27
Exhaust NOX:	2.86	3.06	4.97	3.84	6.28	1.46	1.99	27.12	0.50	3.45
Hot Stabilized Idle Emission Factors (Gm/Min)										
NM-Idle HC:	-0.02	0.81	1.27	1.00	1.17	0.0	0.12	0.36	1.28	0.0
Idle CO:	0.0	12.44	15.20	13.57	10.96	0.0	0.34	0.89	3.51	0.0
Idle NOX:	0.19	0.09	0.08	0.08	0.06	0.20	0.32	0.92	0.02	0.18

Comment: A/C correction factor will be calculated.
Value of inputted AC usage parameter is ignored.

User supplied tampering and misfueling rates, basic exhaust emissions rates, veh registration distributions.

Cal. Year: 1995 I/M Program: Yes Ambient Temp: 81.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.
Absolute Humidity: 83.00 AC (DB / WB): 1.0 (90.0 / 75.0)

Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		16.0	19.6	19.6	16.0	19.6	
VMT Mix:	0.657	0.083	0.057		0.100	0.015	0.070	0.009	0.009	
Extra Load:	0.080	0.120	0.140							
Trlr in Tow:	0.090	0.090	0.090							
Composite Emission Factors (Gm/Mile)										
Non-Meth HC:	2.41	1.60	2.05	1.79	4.81	1.97	0.63	3.22	5.28	2.46
Exhaust CO:	11.18	14.82	16.13	15.35	56.95	2.92	1.55	12.60	20.95	15.64
Exhaust NOX:	0.99	1.35	1.59	1.45	4.27	1.01	1.14	13.55	0.79	1.50
Hot Stabilized Idle Emission Factors (Gm/Min)										
NM-Idle HC:	-0.02	0.15	0.18	0.16	0.34	0.0	0.12	0.27	0.77	0.0
Idle CO:	0.0	2.35	2.89	2.57	2.55	0.0	0.36	0.84	2.47	0.0
Idle NOX:	0.13	0.03	0.03	0.03	0.02	0.13	0.20	0.25	0.04	0.11

Comment: A/C correction factor will be calculated.
Value of inputted AC usage parameter is ignored.

User supplied tampering and misfueling rates, basic exhaust emissions rates, veh registration distributions.

Cal. Year: 2015 I/M Program: Yes Ambient Temp: 81.0 (F) Region: Low
Anti-tam. Program: No Operating Mode: 20.6 / 27.3 / 20.6 Altitude: 500. Ft.
Absolute Humidity: 83.00 AC (DB / WB): 1.0 (90.0 / 75.0)

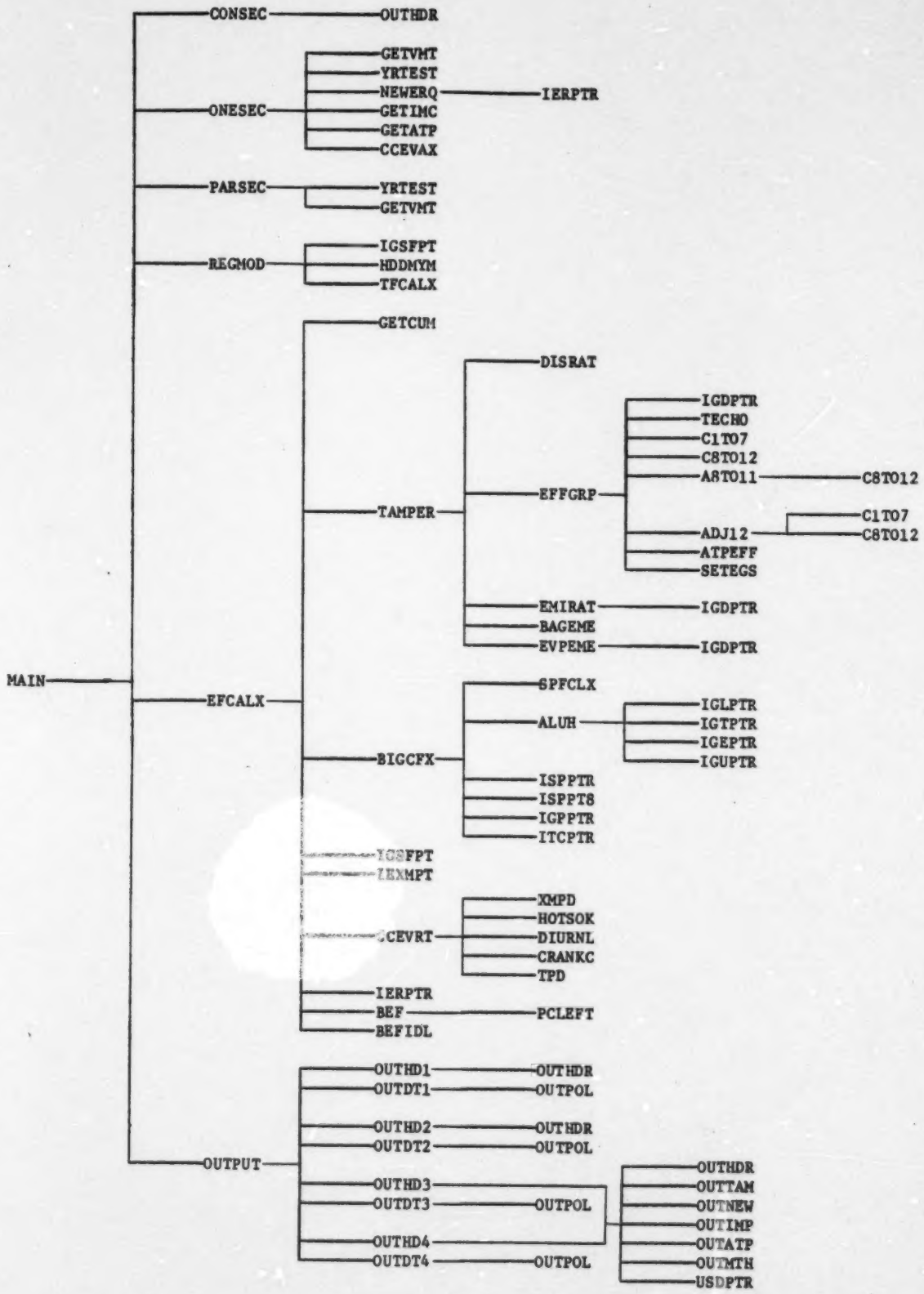
Veh. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
Veh. Speeds:	19.6	19.6	19.6		16.0	19.6	19.6	16.0	19.6	
VMT Mix:	0.657	0.083	0.057		0.100	0.015	0.070	0.009	0.009	
Extra Load:	0.080	0.120	0.140							

Trlr in Tow:	0.090	0.090	0.090							
Composite Emission Factors (Gm/Mile)										
Non-Meth HC:	1.07	1.21	1.25	1.23	3.16	0.40	0.68	3.03	5.28	1.32
Exhaust CO:	10.08	11.87	12.47	12.12	21.69	1.36	1.60	12.01	20.95	10.92
Exhaust NOX:	0.98	1.02	1.06	1.03	4.02	1.02	1.14	12.79	0.79	1.41
Hot Stabilized Idle Emission Factors (Gm/Min)										
NM-Idle HC:	-0.02	0.08	0.09	0.09	0.31	0.0	0.14	0.27	0.77	0.0
Idle CO:	0.0	1.55	1.75	1.63	1.69	0.0	0.38	0.83	2.47	0.0
Idle NOX:	0.13	0.02	0.02	0.02	0.01	0.14	0.20	0.22	0.04	0.11

Appendix A

MOBILE3 STRUCTURE CHART

MOBILE3 STRUCTURE CHART



Appendix B

MOBILE3 MODULE DICTIONARY

MOBILE3 MODULE DICTIONARY

Module	Purpose
MAIN	Controls the overall execution of the program.
CONSEC	Reads into MOBILE3 and verifies the control flags.
ONESEC	Reads into MOBILE3 and verifies the ONE-TIME DATA.
PARSEC	Reads into MOBILE3 and verifies the scenario parameters.
GETIMC	Reads in user-supplied alternative I/M credits.
GETATP	Reads & verifies user-supplied anti-tampering program parameters and effectiveness rates.
YRTEST	Converts a 2-digit input year to a 4-digit year and validates the result.
NEWERQ	Processes user-supplied model year basic exhaust emission rates and zeroes all idle coefficients for the pollutant, vehicle, and region specified. (Since the idle emissions are based solely upon the default emission rates, they are zeroed out when alternate rates are used.)
CCEVAX	Processes user-supplied trip per day and miles per day data.
QUITER	Prints error and warning messages and comments.
REGMOD	Adjusts model year mileage and registration data for January 1 calendar year calculations.
HDDMYM	Computes the weighted calendar year mileage distribution for HDDV's.
TFCALX	Computes the travel fractions for each vehicle type and the VMT mix, if not user-supplied.
EFCALX	Computes the composite FTP, idle and weighted emission factors for each vehicle type.
GETCUM	Computes the January 1 cumulative average mileages for all 8 vehicle types.
TAMPER	Computes the tampering effects on bag emissions and on hot soak, diurnal, & crankcase HC.
DISRAT	Computes the disablement rates for each vehicle type, model year, and mileage distribution.

Module	Purpose
EFFGRP	Constructs the tampering effects technology group sizes.
EMIRAT	Computes/assigns the emission impact rates for the tampering effects groups.
BAGEME	Computes the tampering bag emission effects.
EVAPEME	Computes the tampering evaporative and crankcase HC emission effects.
TECHO	Zeroes out tampering effects group size effects where particular tampering types cannot occur, given the technology.
C1TO7	Calculates overlap categories 1 to 7 for tampering effects group sizes.
C8TO12	Calculates overlap category sizes 8 to 12 for tampering effects group sizes.
A8TO11	Adjusts tampering effects category sizes when any of the non overlapping categories 8 to 11 are negative.
ADJ12	Adjusts all tampering category sizes to eliminate a negative category 12 size.
ATPEFF	Applies the anti-tampering program effectiveness factors to the 11 positive tampering effects categories.
SETEGS	Sets the tampering effects group sizes by combining subsets of the overlap category sizes and weighting by the technology group sizes.
BIGCFX	Determines the basic exhaust emission level correction factors for speed, temperature, humidity, trailer towing, extra load, air conditioning, and percent vehicle-miles-traveled in cold/hot-starts. Also computes the CO Bag 1 and methane offsets.
SPFCLX	Evaluates the 5th degree polynomial (exponentiated for HC and CO) used in computing the speed correction factor for LDGV, LDGT1, LDGT2 and MC.
ALUH	Computes emission correction factors for air conditioning, extra load, trailer-towing, and humidity.

Module	Purpose
CCEVRT	Computes the hydrocarbon crankcase and evaporative emission factors.
HOTSOK	Selects the appropriate hot soak HC value for a given model year, vehicle type and region.
TPD	Selects the appropriate trips/day value for a given model year, vehicle type and region.
DIURNAL	Selects the appropriate diurnal HC value for a given model year, vehicle type and region.
XMPD	Selects the appropriate miles/day value for a given model year, vehicle type and region.
CRANKC	Selects the appropriate crankcase HC value for a given model year, vehicle type and region.
BEF	Determines the basic exhaust model year emission level and adjusts it for operating mode, methane and tampering offsets, temperature, and inspection/maintenance.
PCLEFT	Determines the adjustment that is applied to the basic exhaust emission factor for an inspection/maintenance program.
BEFIDL	Determines the basic idle model year emission level and adjusts it with the methane offset, if necessary.
IGEPTR	Selects the pointer for the fraction of vehicles equipped with air conditioning given the model year, vehicle type, and region.
IGUPTR	Selects the pointer for the fraction of vehicles using air conditioning given the model year, vehicle type, and region.
IGLPTR	Selects the pointer for the fraction of vehicles with extra load given the model year, vehicle type, and region.
IGTPTR	Selects the pointer for the fraction of vehicles with trailer in tow given the model year, pollutant, vehicle type, and region.

Module	Purpose
IGPPTR	Selects the pointer for speed correction factor coefficients given the model year, pollutant, vehicle type, and region.
IERPTR	Selects the pointer for the slope and intercept for values for the exhaust emission rate equation.
ISPPTR	Selects the pointer for the bag speed normalization coefficients (LDV and LDT's only).
ISPPT8	Selects the pointer for the bag speed normalization coefficients (MC only).
IXEMPT	Selects the pointer for the methane offset value given the model year, vehicle type and region.
ITCPTR	Selects the pointer for the temperature correction coefficient given the model year, pollutant, vehicle type, and region.
IGSFPT	Selects the pointer for the gross sales fraction given the model year, vehicle type, and region.
IGDPTR	Selects the pointer for various tampering coefficients.
OUTPUT	Controls the printing of the scenario results.
OUTHD1	Prints the run header when the format flag IFORM=1.
OUTHD2	Prints the run header when the format flag IFORM=2.
OUTHD3	Prints the run header when the format flag IFORM=3.
OUTHD4	Prints the run header when the format flag IFORM=4.
OUTHDR	Prints the run title.
OUTTAM	Prints the user supplied tampering effectiveness rates.
OUTNEW	Prints the user supplied alternate emission equations.
OUTIMP	Prints the I/M program parameters, when required.
OUTATP	Prints the user supplied anti-tampering program parameters.
OUTMTH	Prints messages indicating whether hydrocarbon emissions are non-methane or total.

Module	Purpose
USDPTR	Finds the pointers into the user supplied data name array.
OUTDT1	Prints the scenario results when the format flag IFORM=1.
OUTDT2	Prints the scenario results when the format flag IFORM=2.
OUTDT3	Prints the scenario results when the format flag IFORM=3.
OUTDT4	Prints the scenario results when the format flag IFORM=4.
OUTPOL	Determines which pollutant should be printed.
BLOCK DATA 1	Contains speed correction factor coefficients for LDGV's and LDGT's.
BLOCK DATA 2	Contains the model year mileage and model year registration distributions.
BLOCK DATA 3	Contains the first and last model year groups for FTP and idle emission rates.
BLOCK DATA 4	Contains the FTP exhaust emission zero mileage emission and deterioration rates.
BLOCK DATA 5	Contains the idle exhaust emission zero mileage emission and deterioration rates.
BLOCK DATA 6	Contains the default I/M credits for technologies 1 through 2.
BLOCK DATA 7	Contains the default I/M credits for technologies 4 through 10.
BLOCK DATA 8	Contains the methane offset factors.
BLOCK DATA 9	Contains the hot soak evaporative HC emission values and their model year groups.
BLOCK DATA 10	Contains the average number of trips per day values and their model year groups.
BLOCK DATA 11	Contains the diurnal evaporative HC emission values and their model year groups.
BLOCK DATA 12	Contains the average number of miles per day values and their model year groups.
BLOCK DATA 13	Contains the crankcase HC emission values and their model year groups.

Module	Purpose
BLOCK DATA 14	Contains miscellaneous integer-valued system parameters, such as I/O device numbers, calendar year limits and vehicle group pointer vectors.
BLOCK DATA 15	Contains the temperature correction factor coefficients.
BLOCK DATA 16	Contains the bag and FTP emissions normalized by zero mile FTP rate. Also initializes speed correction factor coefficients for HDG and HDD vehicles.
BLOCK DATA 17	Contains the model year groups for normalized bag fractions.
BLOCK DATA 18	Contains the model year groups for speed correction coefficients.
BLOCK DATA 19	Contains the fraction of vehicles equipped with air conditioning, the air conditioning correction factors, extra load correction factors, and the trailer towing correction factors.
BLOCK DATA 20	Contains the model year groups for air conditioning equipped vehicles, air conditioning correction factors, extra load correction factors, and the trailer towing correction factors.
BLOCK DATA 21	Contains the sales fractions of total fleet sales and their model year groups.
BLOCK DATA 22	Contains character string arrays and their associated pointer variables.
BLOCK DATA 23	Contains the tampering calculation data, model year groups, and related parameters.
BLOCK DATA 24	Contains the model year groups for temperature correction factor coefficients.
BLOCK DATA 25	Contains the model year mileage and model year registration distributions for HDDV.
BLOCK DATA 26	Documents common blocks not initialized by any BLOCK DATA subprogram.

C-i

Appendix C

MOBILE3 SOURCE CODE LISTING

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```
C                    ******* MOBILE3 *******                    May 31, 1984
C
C
C  MOBILE3 is the third version of the FORTRAN program implementation of the
C  Mobile Source Emission Model.  It updates and replaces MOBILE2. The model
C  estimates HC, CO and NOx exhaust and HC evaporative emission factors by
C  motor vehicles.  For information on using the program and on the
C  differences between MOBILE3 and MOBILE2, consult the User's Guide to
C  MOBILE3, EPA 460/3-84-002, and the User's Guide to MOBILE2,
C  EPA 460/3-81-006.  Otherwise questions should be directed to:
C
C        Office of Mobile Sources
C        Emission Control Technology Division
C        Test and Evaluation Branch
C        2565 Plymouth Road
C        Ann Arbor, Mich. 48105
C        Telephone: 313-668-4473
C                   FTS 374-8473
C
C
C  Source Code Documentation
C  -------------------------
C
C  The source code itself is commented to assist the users who require a
C  more detailed understanding of the program than provided in the Guides.
C  This section provides the following information:
C
C  1) Execution summary
C  2) Source code structure
C  3) Source code comments structure
C     a) Subroutines and functions header format
C     b) BLOCK DATA subprograms header format
C     c) In-line comments
C  4) Subscript dictionary
C  5) Subroutine / function parameter dictionary
C
C
C  1) Execution summary
C
C     Introduction:
C
C     MOBILE3 is a computer model designed to estimate mobile source emission
C     factors by vehicle type, calendar year and region.  The model weights
C     emissions from the past 20 model years to obtain fleet emissions as of
C     January 1 of the year requested.  The emissions are adjusted to
C     compensate for tampering, speed, temperature and other factors.
C
C     The MOBILE3 program's MAIN loops through three sections: input,
C     computation and output.  Each of these sections consists of a set of
C     subroutines, each of which may in turn call other subroutines and
C     functions to compute their tasks.  Descriptions of the sections are
C     given below, followed by comments on run termination and data storage.
C     The structure diagram and subprogram dictionary in the User's Guide to
C     MOBILE3 should aid in the discussion.  Note that every subprogram name
C     is entirely in upper case and every subprogram's role is mentioned.
C
C     Input:
C
```

```
C     The input section of MOBILE3 is responsible for reading in values into
C     the program.  These values can either control subsequent I/O, supply
C     the one-time data (used for all scenarios) or describe the individual
C     scenarios to be analysed.
C
C     On the first pass through the code, CONSEC performs the control portion
C     of the input section.  CONSEC reads in the 14 flags which dictate what
C     user input may be required, how the analysis will be performed, and what
C     output format and content will be printed.
C
C     Next on the first pass, ONESEC will check the flags for values
C     indicating one-time data is expected.  The data is read in and screened
C     for being within the ranges expected by the model.  If there are no
C     errors, these values then replace the default values stored in BLOCK
C     DATA or specify features which are only partially initialized in B.D.
C     or not at all.  Examples of the first case are tampering rates,
C     registration and mileage accrual rate distributions, basic emission
C     rates, and trips and miles per day.  Examples of the second case are the
C     Inspection / Maintenance (I/M) program and the Anti-Tampering (A-T)
C     program.  This subroutine calls GETIMC, GETATP, GETVMT, NEWERQ and
C     CCEVAX to read in I/M, A-T, vmt, emission rate and evaporative related
C     data, respectively.
C
C     Finally, PARSEC reads in the parameter record for the first scenario.
C     These parameters are region, calendar year, speed, temperature and
C     hot / cold start percentages.  Depending on the control flags, a new vmt
C     mix can be entered via GETVMT and / or supplemental correction factors
C     may also be read.  In subsequent passes only PARSEC is called for input.
C     ONESEC, GETATP and PARSEC call YRTEST to check if a year value is in
C     the allowed range.
C
C     Computation
C
C     The computation of MOBILE3 emission factors is handled by REGMOD and
C     EFCALX.  Each of these subroutines calls a number of lesser routines,
C     each of which performs a step or steps in the procedure.  REGMOD is
C     called on the first pass and thereafter only when the calendar year,
C     region or altitude changes.  EFCALX is called on every pass.
C
C     This section generates composite emission factors: corrected emission
C     rates from the 20 model years up through the calendar year are
C     weighted together by their registration and mileage distributions.
C     REGMOD constructs the weighting factors.  REGMOD calls HDDMYM to build
C     the calendar year dependent HDDV mileage distribution and TFCALX to
C     combine the distributions into travel fraction weights.
C
C     EFCALX is the emission factor calculation driver.  First, once-per-
C     scenario calls are made to assemble the correction and weighting
C     factors to be used.  Correction factors compensate for scenario
C     deviations from the FTP standard conditions assumed by MOBILE3 in
C     developing the hard-coded basic emission rates and related data.
C     GETCUM calculates the cumulative mileage distribution.  TAMPER figures
C     the vehicle tampering offsets, including the counter-effects of an
C     A-T program.  BIGCFX generates the adjustments for speed (via SPFCLX),
C     temperature, methane and CO offset and cold / hot start operating mode.
C     BIGCFX also calls ALUH to produce the corrections for air conditioning,
C     extra loading, trailer towing and humidity.
C
```

```
C     Note that the tampering group of 13 subroutines and 1 pointer function
C     is the major new feature in MOBILE3.  TAMPER calls DISRAT to figure
C     disablement rates, EFFGRP to compute tampering effects group sizes,
C     EMIRAT to assign emission impact rates, BAGEME to combine group sizes
C     and impact rates into bag emission effects, and EVPEME to generate the
C     HC evaporative effects.  EFFGRP calls TECHO, C1TO7, C8TO12, A8TO11,
C     ADJ12, ATPEFF and SETEGS to carry out the series of steps necessary
C     to obtain the group sizes.  ATPEFF is where the anti-tampering program
C     effectiveness rates are applied to reduce the sizes.
C
C     EFCALX then loops through each pollutant, vehicle type and model year
C     case, computing, correcting, weighting and adding that case's
C     contribution to the composite results for the calendar year selected.
C     CCEVRT returns the non-exhaust HC factor, including hot soak (HOTSOK),
C     diurnal (DIURNL) & crankcase (CRANKC) HC, weighted by trips / day (TPD),
C     and miles / day (XMPD).  BEF extracts the basic exhaust emission rate,
C     corrects it for operating mode, temperature, tampering, methane and CO
C     offsets and I/M program, the last via a call to PCLEFT.  BEFIDL
C     determines the basic idle emission factor.  EFCALX itself applies the
C     speed and ALUH corrections and the travel fraction weighting factor.
C     After all cases have been processed, control is transferred to OUTPUT.
C
C     Output
C
C     On every pass, OUTPUT routes the results to the report unit using the
C     format chosen by the user.  Each number (#) of the four possible format
C     codes has its own branch in OUTPUT to subroutines labelled OUTHD# and
C     OUTDT#.  Called only on the first pass, OUTHD# echoes the run title via
C     OUTHDR and, if a numeric format, the field headers or, if a descriptive
C     format, information pertaining to all scenarios.
C
C     Formats 1 and 2 are the numeric formats.  Data written out via 1 or 2
C     is easily read back into post-processors.  There is no narrative aside
C     from the run title and the field descriptors at the top of the file.
C     Formats 3 and 4 are descriptive formats and are intended for hard-copy
C     reports.  Run and scenario parameter information is echoed out and
C     field descriptors are supplied for each scenario.  Depending on the
C     control flags, OUTHD3/4 can call OUTTAM (tampering rates), OUTNEW
C     (emission rates), OUTIMP (I/M program), OUTATP (A-T program), OUTMTH
C     (type HC) and / or USDPTR (user supplied data comments pointers).
C     All 4 OUTDT# call OUTPOL to select the pollutants to be printed.
C
C     Program termination
C
C     After the last scenario is processed, execution is terminated normally
C     by an end-of-file (eof) return on PARSEC's attempt to read in another
C     scenario record.  Abnormal termination can occur prior to that point
C     for a number of reasons, as described in the User's Guides.  Except for
C     GETIMC and GETATP, all errors and warnings are routed through QUITER.
C     Just one error aborts a scenario, some errors abort the entire run, and
C     50+ errors of any type also stop the run.
C
C     BLOCK DATA and pointer functions
C
C     Data variables and arrays are usually passed via common blocks.
C     Most of the common storage areas are initialized in a series of 25 BLOCK
C     DATA subprograms. The remainder are documented in BLOCK DATA 26 and are
C     assigned values during execution (by user input or program computation),
```

```
C     instead of during compilation.  To reduce the common area size, much of
C     the data was compressed, storing only once a value used by a contiguous
C     set of years, usually given the region and vehicle type.  By storing
C     also these model year ranges, pointer functions can then subsequently
C     access the data, picking out the right value for the case being
C     evaluated.  The pointer functions (with arrays accessed in parentheses)
C     are IGEPTR (ACEQIP), IGUPTR (ACCF), IGLPTR (XLCF), IGTPTR (TWCF),
C     IGPPTR (GPACOF, GPBCOF), IERPTR (ZMLBEF, DRBEF, ZMLIDL, DRIDL),
C     ISPPTR & ISPPT8 (SPBACK), IEXMPT (EXMETH), ITCPTR (TTACOF, TT4COF),
C     IGSFPT (GSFRAC) and IGDPTR (TGS, EMEGR, EVPTGS, EVPEMI).
C
C
C  2) Source code structure
C
C     This section describes the layout of the code plus the numbering and
C     naming conventions.
C
C     The source code for the subprograms is grouped as follows:
C
C        program header
C        MAIN
C        input subroutines
C        QUITER
C        computation subroutines
C        computation functions
C        pointer functions
C        output subroutines
C        BLOCK DATA subprograms
C
C     Within each grouping and nesting level, the routines usually appear in
C     calling order.
C
C     The User's Guide listing of the code has each subprogram starting at an
C     integral multiple of 1000, simplifying the construction of the Table
C     of Contents.  That listing also has the comments in mixed case, to
C     improve readability.  The MOBILE3 tape being mailed out to the user
C     community has this mixed case version in File 1.  An upper case only
C     version, with hyphens replacing underscores and blanks replacing plus
C     carriage controls, is in File 2, for use by installations not able to
C     process these features.  For example, EPCDIC PN character set is upper
C     case only.
C
C     Statement number ranges are defined for usage as follows:
C
C          1 -  9  -  not used
C         10 - 98  -  branching
C            99    -  branch to last RETURN / RETURN1 / STOP before END
C        100 - 199 -  READ formats
C        200 - 299 -  WRITE prompt and output formats
C        300 - 399 -  WRITE error and warning messages
C        400+      -  not used
C
C     Statement numbers are local.  For example, within each subprogram,
C     branch numbers start at 10, READ formats start at 100, etc.
C
C     Given FORTRAN's 6 character maximum on subprogram name lengths, useful
C     naming conventions are hard to come by.  There is also the limitation
C     posed by not wanting to change arbritrarily all the subprogram names of
```

```
C     the predecessor program, MOBILE2.  Hence, the only conventions are:
C
C     a) Input driver sections all have the suffix 'SEC'.
C     b) Pointer functions all begin with 'I' (to get default INTEGER typing).
C     c) Pointer functions all contain/end with 'PT' or 'PTR'.
C     d) Output subroutines all have the prefix 'OUT'.
C
C     Otherwise, new subprogram names were picked to indicate the purpose of
C     the code.
C
C
C  3) Source code comments structure
C
C     Each subprogram contains a documentation header, set up in a standard
C     format as described below.  All variables and arrays used in the code
C     are defined in the comments.  The subroutine / function headers define
C     local parameters and local variables / arrays.  The BLOCK DATA headers
C     describe the COMMON storage areas.  Array subscripts and subprogram
C     parameters are specified in dictionaries following this section.  The
C     intent is to allow the user to scan the source code on-line for
C     definitions, rather than have to leaf through hard-copy documentation
C     such as MOBILE2's APPENDIX A.
C
C     a) Subroutines and functions header format
C
C        <subprogram name>
C        C
C        C  <short description of purpose>
C        C
C        C  Called by <subprogram name(s)>
C        C
C        C  Calls <subprogram name(s)>
C        C
C        C  Input on call:
C        C
C        C    parameter list: <names>
C        C    common block(s):
C        C    /<cb name>/ <names>
C        C          .         .
C        C          .         .
C        C
C        C  Output on return:
C        C
C        C    parameter list: <names>
C        C    common block(s):
C        C    /<cb name>/ <names>
C        C          .         .
C        C          .         .
C        C
C        C  Local array subscripts:
C        C
C        C  <name>(<#>,...)  -  <name>(<name>,...)
C        C          .                    .
C        C          .                    .
C        C
C        C  Local variable / array dictionary:
C        C
C        C   Name   Type              Description
```

```
C       C  ------  ----  ------------------------------------------------
C       C  <name> <type>         <short description>
C       C    .      .                    .
C       C    .      .                    .
C       C
C       C  Notes:
C       C
C       C  <notes on subprogram, particularly changes from MOBILE2>
C       C
C       C
C       <code>
C
C       Notes on format:
C
C       A local variable is one not passed in via the parameter list
C       or a common block.  It can be used in the argument list of a
C       subprogram call made by the defining subprogram.
C
C       Also, if a section of the header is not needed, its format is
C       omitted.  For example, if no subprograms are called, then the
C       'C  Calls <names>' line is not included.
C
C       Finally, 'Output on return' includes any variable / array whose
C       contents can be modified by the subprogram.  This usually will not
C       include data that can be changed by subprograms called by the
C       subprogram, since the comment headers on those subprograms will
C       indicate what is being passed back up.
C
C     b) BLOCK DATA subprogram header format
C
C             BLOCK DATA
C       C
C       C  BLOCK DATA subprogram <#>
C       C
C       C  <short description of data initialized in this BLOCK DATA>
C       C
C       C  Common block array subscripts:
C       C
C       C  <name>(<#>,...)  -  <name>(<name>,...)
C       C         .                    .
C       C         .                    .
C       C
C       C  Common block dictionary:
C       C
C       C   Name   Type              Description
C       C  ------  ----  ------------------------------------------------
C       C  /<cb name>/:
C       C  <name> <type>         <short description>
C       C    .      .                    .
C       C    .      .                    .
C       C
C       C  Local array subscripts:
C       C
C       C  <name>(<#>,...)  -  <name>(<name>,...)
C       C         .                    .
C       C         .                    .
C       C
C       C  Local array dictionary:
```

```
C        C
C        C   Name   Type              Description
C        C  ------  ----  ---------------------------------------------------
C        C  <name> <type>         <short description>
C        C    .      .                    .
C        C    .      .                    .
C        C
C              COMMON /<name 1>/ ...
C                  .
C                  .
C                  .
C        C
C              DIMENSION (or type) <array 2>(subscript(s))
C                  .
C                  .
C        C
C              EQUIVALENCE (<array 1, subscripted>,<array 2, subscripted>)
C                  .
C                  .
C                  .
C        C
C        C  /<name 1>/: <any comments on <name 1>'s labels, purpose or data
C        C                or on the structure of the initializing DATA
C        C                statement(s)>
C        C
C              DATA <var/arr name 1>/<data>...
C                  .
C                  .
C                  .
C                  .../
C        C
C        C  /<name 2>/: ...
C                  .
C                  .
C                  .
C              END
C
C        Notes on format:
C
C        Local arrays are defined and then equivalenced to common block arrays
C        that are too large be intialized in 1 DATA statement.  Too large =
C        would require greater than 19 continuation lines, the FORTRAN limit.
C
C        The local arrays dictionary is often compressed by providing a
C        generic definition of the conventions used to construct and name the
C        set of local arrays to be equivalenced to a given common array.
C
C        "/<name #>/:" prefix is included only if a large number of common
C        blocks are being initialized in a single BLOCK DATA (see BD 23).
C
C
C     c) In-line statements
C
C        In-line comments are intended to describe the algorithm being used
C        by the code.  Where MOBILE3 is identical to MOBILE2 in operation,
C        the MOBILE2 comments have usually been left intact.  Where the
C        method has been updated or the whole section / subprogram is new,
C        the in-line comments describe the MOBILE3 methodology.
```

```
C
C        Particular attention is paid to the use of indices and pointers.
C        Some of the ambiguities of MOBILE2, such as the use of IDX vs JDX,
C        have been cleared up.  The usage of new keys and pointers, as in
C        the TAMPER group of routines, is specified in detail where they
C        occur.
C
C
C  4) Subscript dictionary
C
C     Subscript variables used to index arrays in MOBILE3 are globally
C     defined, not in the sense that the values are available to all
C     subprograms, but rather that the same label is used for the same
C     subscript function throughout the code.  IP is the 3 pollutants index
C     for all of MOBILE3, although its instances are usually as a local
C     variable.  As array subscripts, all these variables must be of type
C     INTEGER. The default INTEGER typing syntax rule is employed by having
C     all subscripts begin with a letter from the range I through N.
C
C      Name    Range              Description
C     ------  -------  ---------------------------------------------------
C     IAD       1-5    index into ID dimension of ATR for ADJFAC equation
C
C     IADJ      1-2    index into CSIZE adjustment vector ADJFAC
C
C     IAY       1-2    anti-tampering program start year flag:
C                        1 = in year range up thru start year
C                        2 = in year range after start year
C
C     IB        1-3    bag number:
C                        1 = cold start
C                        2 = hot stabilized
C                        3 = hot start
C
C     IBER      1-2    terms of user supplied new emission rate equation:
C                        1 = zero mile level (intercept)
C                        2 = deterioration rate (slope)
C
C     IC        1-7    overlap effects categories computed direct from base
C                      tamper rates; each case is the set intersection of
C                      the indicated disablement types:
C                        1 = AIRS * CATS
C                        2 = AIRS        * NCKS
C                        3 = AIRS                * TNKS
C                        4 = AIRS * CATS * NCKS
C                        5 = AIRS * CATS         * TNKS
C                        6 =        CATS * NCKS
C                        7 =        CATS         * TNKS
C
C               8-12   no overlap effects categories computed from the 7
C                      overlap cases:
C                        8 = AIRS
C                        9 = CATS
C                       10 = NCKS
C                       11 = TNKS
C                       12 = <no tampering effect>
C
C     ICH       1-20   character string array position index:
```

```
C                          1 = 1st 4/8 characters (INT or REAL = 4, REAL*8 = 8)
C                          2 = 2nd 4/8 characters
C                                .
C                                .
C
C     ICOEFF    1-6    coefficient number of 5th degree polynomial
C                      (0th (intercept) to 5th decree term coefficients)
C
C     ICS       1-NT   secondary index: selects pointers to category
C                      sizes to be summed up to get SUB (in C8T011) and
C                      DIV (in A8T011)
C
C     IC11      1-11   positive tampering effects categories 1-11; 12 is the
C                      no effects case.
C
C     IC7       1-7    overlap tampering effects categories 1-7
C
C     ID        1-7    disablement types (1-5 for bag, 6-7 for evap):
C                        1 = AIRS = air pump disabled
C                        2 = CATS = catalyst removed
C                        3 = NCKS = misfueled - filler neck
C                        4 = TNKS = misfueled - tank (all but filler neck)
C                        5 = EGRS = EGR disabled
C                        6 = EVAP = evap tampered
C                        7 = PCVS = PCV disabled
C
C     IDX       1-20   model year (my) window index:
C                        1 = 20+ my age group cell => tamper effect is
C                            always 0.0 => this case skipped in TAMPER (only)
C                        2 = 19th my cell
C                        3 = 18th my cell
C                          .
C                          .
C                          .
C                       19 = 2nd my cell
C                       20 = 1st my cell = calendar year (ICY)
C
C     IEG       1-7    tampering effects group:
C                        1 = air pump disabled, air pump only equipped
C                        2 = air pump disabled, air pump/catalyst equipped
C                        3 = catalyst removed
C                        4 = misfueled catalyst
C                        5 = EGR disabled
C                        6 = EGR disabled / catalyst removed
C                        7 = EGR disabled / misfueled
C
C     IEK       1-3    catalyst emission effects groups: IEK = IEG - 1
C
C     IELST     4-7    last non-zero tampering effects group size, given IPG
C
C     IEQU      1-20   pointer to idle equation to be zeroed out due to entry
C                      of new exhaust ef equation by user
C
C     IERNEW    1-20   pointer to location in default ef rates & model years
C                      arrays where new ef equation's parameters are to be
C                      stored (IERNEW = 0 => no space for new equation)
C
C     IEX       1-5    model year group pointer into EXMETH
```

```
C
C     IE1ST     1-3    first non-zero tampering effects group size, given IPG
C
C     IFAC      1-100  index into new (user supplied) emission rates arrays;
C                      the user can enter up to 100 replacement cases.
C
C     IFG       1-13   flag names for prompts (listed by common block used):
C                         /FLAGS1/      /FLAGS2/       /FLAGS3/
C                       1 = TAMFLG    4 = MYMRFG     9 = IFORM
C                       2 = SPDFLG    5 = NEWFLG    10 = PRTFLG
C                       3 = VMFLAG    6 = IMFLAG    11 = ICEVFG
C                                     7 = ALHFLG    12 = IDLFLG
C                                     8 = ATPFLG    13 = NMHFLG
C                      The 14th flag (or 0 = IPROMT) is read without a prompt.
C
C     IG<i>     1-20   model year group pointer:
C                      <I> = null string,E,L,S,T,U,1,2,3,4
C                      IG links a data array to its corresponding myg index
C                      array. These data arrays all have my as a subscript
C                      plus have cases of contiguous subsets of years with
C                      the same data point.  Core space is then saved by
C                      storing each point only once per my subset and then
C                      constructing an index array to enable the program to
C                      find the location IG<i> of the data point for a given
C                      my.
C
C     IH        1-3    non-exhaust HC emission case:
C                       1 = hot soak evaporative
C                       2 = diurnal evaporative
C                       3 = crankcase
C
C     IHG       1-2    non-exhaust HC technology / tampering case:
C                       1 = evaporative
C                       2 = crankcase
C
C     ILU       1-2    bounds of a value range (ex.: tags of nonzero
C                      category sizes):
C                       1 = lower bound
C                       2 = upper bound
C
C     IM        1-2    I/M program flag:
C                       1 = I/M program not in effect before evaluation
C                           year
C                       2 = I/M program is in effect before evaluation
C                           year
C
C     INO       1-2    index into NOYES character string vector:
C                       1 = No     2 = Yes
C
C     IP        1-3    pollutants:
C                       1 = HC  = hydrocarbon
C                       2 = CO  = carbon monoxide
C                       3 = NOx = oxides of nitrogen
C
C     IPAR      1-5    parameters identifying where and when to apply user
C                      supplied new emission rates:
C                       1 = region
C                       2 = vehicle type      4 = first my of range covered
```

```
C                          3 = pollutant        5 = last my of range covered
C
C     IPG       1-2    pollutants grouped for tampering effects:
C                          1 = HC and CO
C                          2 = NOX
C
C     IP1       1-3    lower bound of output IP loop (first pollutant to
C                      have results printed)
C
C     IP2       1-3    upper bound of output IP loop (last pollutant to
C                      have results printed)
C
C     IQG       1-6    emission control equipment group; 2 more groups
C                      computed from the stored 6 groups data:
C                          1 = air pump only
C                          2 = air pump / catalyst
C                          3 = catalyst only
C                          4 = EGR only
C                          5 = EGR / 3-way catalyst
C                          6 = no EGR / 3-way catalyst
C
C     IR        1-3    region code:
C                          1 = low altitude
C                          2 = high altitude
C                          3 = mid (interpolated between low and high) altitude
C
C     IS        1-4    overlap tampering effects category sizes 8-11
C                      ( IS = IC - 7 ); used in A8T011.
C
C     ISC       1-5    underscore string repetition counter - for example,
C                      ISC = 3 => repeat the string 3 times
C
C     ISP       1-21   my group pointer into speed correction equation array;
C                      found by ISPPTR or ISPPT8; indexes AIN & SPBACK.
C
C     IT        1-9    pointer to temperature correction equation
C                      coefficients; found by ITCPTR; indexes TTA/4/7COF
C                      arrays.
C
C     ITER      1-4    unspecified string iterations counter; same usage as
C                      ISC, only with any string
C
C     ITY       1-3    type tampering rates wrt I/M table heading substring
C                      pointer
C
C     IV        1-8    vehicle types evaluated by MOBILE3:
C                          1 = LDGV  = light duty (ld) gasoline fueled vehicle
C                          2 = LDGT1 = ld gasoline fueled truck, <= 6000 lbs.
C                          3 = LDGT2 = ld gasoline fueled truck, 6001-8500 lbs.
C                          4 = HDGV  = heavy duty gasoline fueled vehicle
C                          5 = LDDV  = light duty diesel fueled vehicle
C                          6 = LDDT  = light duty diesel fueled truck
C                          7 = HDDV  = heavy duty diesel fueled vehicle
C                          8 = MC    = motorcycle
C
C     IV<i>     1-6    vehicle type subgroups; index correction factor arrays;
C                      <i> = G, T, A or B, defined as:
C                          IVG        IVT        IVA        IVB
```

```
C                          1 = LDGV    1 = LDGV    1 = LDGV    1 = HDGV
C                          2 = LDGT1   2 = LDGT1   2 = LDGT1   2 = LDDV
C                          3 = LDGT2   3 = LDGT2   3 = LDGT2   3 = LDDT
C                          4 = LDDV    4 = LDDV    4 = MC      4 = HDDV
C                          5 = LDDT    5 = LDDT
C                          6 = MC      6 = MC
C                        indexes:
C                          MYGSPD      TTACOF      SCFADJ      GPBCOF
C                          GPACOF                  ISPGRP
C                                                  ALHRET
C                        See subroutines BIGCFX & ALUH and function ISPPTR.
C
C     IVF1      1-6      vehicle class types for MOBILE1 numeric output
C                        format (IFORM = 1):
C                          1 = LDV     3 = LDT2    5 = HDD
C                          2 = LDT1    4 = HDG     6 = MC
C
C     IVF2      1-9      vehicle class types for MOBILE2 numeric output
C                        format (IFORM = 2):
C                          1 = LDGV    4 = LDGT    7 = LDDT
C                          2 = LDGT1   5 = HDGV    8 = HDDV
C                          3 = LDGT2   6 = LDDV    9 = MC
C
C     IVF3      1-10     vehicle class types for MOBILE3 descriptive output
C                        format (IFORM = 3): same as IVF2 plus 10 = All Vehicles
C
C     IVIM      1-3      vehicle class types that can be included in MOBILE3
C                        inspection / maintenance (I/M) programs:
C                          1 = LDGV    2 = LDGT1   3 = LDGT2
C
C     IVP       1-3      vehicle types whose ef's can be modified by correction
C                        factors for extra load, trailer towing &/or CO offset:
C                          1 = LDGV    2 = LDGT1   3 = LDGT2
C
C     IVTAM     1-4      vehicle types impacted by tampering:
C                          1 = LDGV    2 = LDGT1   3 = LDGT2   4 = HDGV
C
C     IV9       1-9      vehicle type categories for output arrays EFEVAP,
C                        EFIDLE, & EFFTP.  First 8 are identical to IV's.
C                          9 = LDGT
C                            = LDGT1 + LDGT2, each weighted by its vmt share
C
C     I2ND      1-4      secondary index (pointer into a pointer vector)
C
C     JCS       1-7      pointer to category size to be summed into DIV
C                        (in A8TO11) or (* TGSUSE) into EGS (in SETEGS)
C
C     JDX       10-1     model year window index = age of vehicle relative to
C                        ICY + 1. In detail:
C                         20 = 20+ my age group cell => tamper effect is
C                              always 0.0 => this case skipped in TAMPER (only)
C                         19 = 19th my cell
C                         18 = 18th my cell
C                          .
C                          .
C                          .
C                          2 = 2nd my cell
C                          1 = 1st my cell = calendar year (ICY)
```

```
C
C     JG        1-20   model year group pointer = IG or 21 - IG, depending on
C                      whether looking for match or unused cell, respectively,
C                      in MYGERQ.
C
C     JOU       1-3    output unit key:
C                        cell 1 is assigned IOUREP's value
C                        cell 2 is assigned IOUERR's value
C                        cell 3 is assigned IOUASK's value
C
C     JPGD      1,5    pointer to base tamper rate to be used in
C                      computing CSIZE(1-3,IAY).  Depends on IPG.
C
C     JU        1-9    input / output (i/o) device unit numbers
C
C     KDX       1-21   model year window index = ICY - 1979, unless result is
C                      < 1 (=> = 1) or > 21 ( => = 21); used by HDDMYM
C
C     LINES     1-9    number of lines in user entered data set title
C
C
C
C  5) Subroutine / function parameter dictionary
C
C     Variables /arrays occurring in 1 or more of the subprogram parameter
C     lists are defined in this section, unless the variable is a subscript,
C     in which case look it up in 4)'s subscript dictionary.  The motivation
C     for defining all the parameter lists in one place is to have only one
C     instance of a definition in the code plus to encourage only one use
C     for a mnemonic in the code plus the combined lists contain only 18
C     names after subscripts have been removed.  Whether scanning on-line or
C     off a listing, the lookup will be quick.
C
C     Parameter array subscripts
C     --------------------------
C     CSFUSE(7)          -  CSFUSE ( IC7 )
C     CSF1ST(7,2)        -  CSF1ST ( IC7, IPG )
C     SALHCF(20,3,8,2)   -  SALHCF ( IDX, IP, IV, IR)
C     SPARA(8)           -  SPARA  ( IV )
C     SPBACK(18,3,8)     -  SPBACK ( IG, IP, IV )
C
C      Name   Type              Description
C     ------  ----  ------------------------------------------------------
C     CSFUSE   R    category size factors used * ATR to calculate CSIZE
C     CSF1ST   R    category size factor for 1st calculation of CSIZE
C     ICASE    I    flags the my groups array to be searched.
C     ICY      I    calendar year for which emission factors are calculated
C     INERR    I    cumulative count of data entry errors
C     IOUOUT   I    unit number on which title is printed
C     IVALUE   I    entered integer value causing error / warning message
C     IY       I    year to test and adjust to 4-digit year
C     IY1      I    lower 4-digit bound for IY
C     IY2      I    upper 4-digit bound for IY
C     MESSAG   I    message code sent by calling subprogram
C     MY       I    model year
C     NERR     I    number of error if IY is out of bounds
C     RVALUE   R    entered real value causing error / warning message
C     SALHCF   R    speed and optional correction factors to apply to basic
```

```
C                    emission factors
C     SPARA    R     average speed for each vehicle type
C     SPBACK   R     speed correction factors, adjusting bef's, which are
C                    calculated at an assumed average speed of 19.6 mph, to
C                    ef's at the user entered scenario average speed
C     VMTAGE   R     vehicle cumulative mileage
C
C     IC, IDX, IG, IM, IP, IP1, IP2, IR and IV are parameters defined in the
C     subscript dictionary.
C
C
C
C
C
```

```
C  MAIN
C
C  MAIN is the MOBILE3 driver.  It sets up the run and then loops through
C  scenarios.
C
C  Calls CONSEC, ONESEC, PARSEC, REGMOD, EFCALX and OUTPUT.
C
C  Since MAIN is not "called" and does not "return", the I/O interface
C  documentation will list the variables passed in argument lists or common
C  blocks and used in MAIN:
C
C    argument lists: ICY,INERR
C    common blocks:
C    /IOUCOM/ IOUERR
C    /REGCOM/ IREJN,ALT
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  ALTOLD   R    altitude code from previous pass of scenario loop
C  ICYOLD   I    calendar year from previous pass of scenario loop
C  IROLD    I    region from previous pass of scenario loop
C
C  Notes:
C
C  MOBILE3 splits INPUT into CONSEC, ONESEC and PARSEC, corresponding to the
C  input and processing of the values for the Control, One-time Data and
C  Parameter sections, respectively.  the I/O interface with MAIN is
C  simplified: INITFL is eliminated - one does not have to distinguish between
C  setup and scenario calls within one subroutine.  IRDFLG was replaced by
C  a RETURN1 direct to 99.
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG,ALHFLG,ATPFLG,PRTFLG
      REAL JULMYR,JANMYR
      REAL LHDVM,MHDVM,HHDVM,LHDRG,MHDRG,HHDRG
      REAL*8 USNAME
C
      COMMON /ACOM/    AIN(6,21,3)
      COMMON /ALUHAC/ ACEQIP(8,3,2),ACCF(2,3,2,3,2)
      COMMON /ALUHLT/ XLCF(3,6,3,2),TWCF(3,6,3,2)
      COMMON /ALUPAC/ MYGACE(8,3,2),MYGACC(2,3,2)
      COMMON /ALUPLT/ MYGXLC(6,3,2),MYGTWC(6,3,2)
      COMMON /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG(4),NLAT,ATNAME(20,9)
      COMMON /BASETR/ BTR(7,2),ZMLTAM(7,2,4),DRTAM(7,2,4)
      COMMON /BEFCMD/ DRBEF(20,3,8,2)
      COMMON /BEFCMZ/ ZMLBEF(20,3,8,2)
      COMMON /BEFGCM/ EXMETH(3,5,8,2),MYGEXM(5,8,2)
      COMMON /CEVCOM/ USRTPD(8),USRMPD(8)
      COMMON /CRACOM/ MAXCRA,CRAVAL(3,8,2),MYGCRA(3,8,2)
      COMMON /CUMCOM/ CUMMIL(20,8)
      COMMON /DIUCOM/ MAXDIU,DIUVAL(13,8,2),MYGDIU(13,8,2)
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /EMECAL/ EM3W(3,3,3),EMOX(3,3,3),EMEGR(4,3,3),EMI(7,3,3)
      COMMON /ERQCOM/ MYGERQ(20,2,3,8,2)
      COMMON /EVPDAT/ EVPAER(2,2),EVPTGS(3,2,4),EVPEMI(11,3,4)
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
```

```
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /GPCCOM/ GPACOF(8,13,3,6),GPBCOF(3,3,3,4)
      COMMON /GSFCOM/ MAXGSF,GSFRAC(22,8,2),MYGSF(22,8,2)
      COMMON /HDDMAR/ C2BDVM(20),LHDVM(20),MHDVM(20),HHDVM(20)
      COMMON /HDDREG/ C2BDRG(21),LHDRG(21),MHDRG(21),HHDRG(21)
      COMMON /HOTCOM/ MAXHOT,HOTVAL(13,8,2),MYGHOT(13,8,2)
      COMMON /IDLCMD/ DRIDL(20,3,8,2)
      COMMON /IDLCMZ/ ZMLIDL(20,3,8,2)
      COMMON /IMCR12/ CRED12(19,20,5,2,2)
      COMMON /IMCR4P/ CRED4P(19,2,7,3,3)
      COMMON /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
      COMMON /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME(20,9)
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /ISPCOM/ MYGSPD(21,2,3),MYGSMC(21,2,3)
      COMMON /IVPCOM/ IVPTRG(8),IVPTRT(8),IVPTRA(8),IVPTRB(8)
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LDXMYR,IAY
      COMMON /MYRCAL/ XMYM(20,8),JANMYR(20,8),TF(20,8),TFMYM(20,8)
      COMMON /MYRSAV/ AMAR(20,8),JULMYR(20,8),NEWCUM
      COMMON /MYUBPT/MYTGS(10,6,4),MYEGR(4,4),MYVTS(3,2,4),MYVEI(11,2,4)
      COMMON /NEWCOM/ NEWPAR(5,100),BERNEW(2,100),NEWFIT(100),NEWCT
      COMMON /NEWEQU/ MAXEQU
      COMMON /OFFCOM/ OFFCO(20,3),OFFMTH(20,8)
      COMMON /OMTCOM/ OMTCF(20,3,8),OMTTAM(20,3,4)
      COMMON /PROJCM/ PROJID(20)
      COMMON /PTRCOM/ MAXIGP,MYGPBA(13,3,2,8)
      COMMON /REGCOM/ IREJN,ALT
      COMMON /REGSUM/ GSFVCT(8)
      COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
      COMMON /RET1/   ALHRET(20,4,3)
      COMMON /SIZCAL/ ATR(7),TGSUSE,CSIZE(12),CSAE(12)
      COMMON /SIZPAR/ NTERMS(4),INDXCS(5,4)
      COMMON /STRING/ NOYES(2),COMMA,PERIOD
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /TAMOUT/ TAMBAG(3,3,20,4),TAMEVP(3,20,4)
      COMMON /TCCOM1/ TTACOF(2,3,9,3,6),TT4COF(2,9,3),TT7COF(2,3)
      COMMON /TCCOM2/ MAXTCF,MYGTCF(9,3,2,8)
      COMMON /TPDCOM/ MAXTPD,TPDVAL(2,8,2),MYGTPD(2,8,2)
      COMMON /USDATA/ USNAME(4,4),NUSD,IUSD(4)
      COMMON /VMXCOM/ VMTMIX(8)
      COMMON /XCFS1/  AC,XLOAD(3),TRAILR(3),ABSHUM,DB,WB
      COMMON /XMPCOM/ MAXXMP,XMPVAL(2,8,2),MYGMPD(2,8,2)
      COMMON /YEARS4/ IY1941,IY1960,IY2020
C
C  Setup run.
C
      INERR=0
      ICYOLD=-1
      IROLD=-1
      ALTOLD=-1.
C
C  Alternate RETURN1 is the fatal read error exit: execution stops.
C
      CALL CONSEC(&99)
      CALL ONESEC(INERR,&99)
C
```

```
C  Enter scenario loop.
C
   10 CALL PARSEC(ICY,INERR,&99)
C
C  50+ errors is (arbitrary) run limit => stop execution.  Otherwise,
C  one or more input processing errors => abort current scenario & then do
C  input processing for error diagnostics on the remaining scenarios.  INERR
C  is never reset to 0, but instead accumulates until the run ends or the
C  cutoff value (50) is reached.
C
      IF(INERR.GT.50) GOTO 20
      IF(INERR.GT.0) GOTO 10
C
      IF(ICYOLD.NE.ICY.OR.IROLD.NE.IREJN.OR.ALTOLD.NE.ALT)
     *   CALL REGMOD(ICY,INERR)
      IF(INERR.GT.50) GOTO 20
      IF(INERR.GT.0) GOTO 10
      ICYOLD=ICY
      IROLD=IREJN
      ALTOLD=ALT
C
      CALL EFCALX(ICY,INERR)
      IF(INERR.GT.50) GOTO 20
      IF(INERR.GT.0) GOTO 10
C
      CALL OUTPUT(ICY)
      GOTO 10
C
   20 WRITE(IOUERR,300)
  300 FORMAT('0',T2,'Excess data errors prevent further analysis.')
C
   99 STOP
      END
```

```
      SUBROUTINE CONSEC(*)
C
C  CONSEC reads in and validates the Control Section flags.  It also sets the
C  input mode for the run, resets the output units (if requested) and reads in
C  and stores the run title.
C
C  Called by MAIN.
C
C  Calls MOD (FORTRAN library function), OUTHDR and QUITER.
C
C  Input on call:
C
C    common blocks:
C    /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
C
C  Output on return:
C
C    common blocks:
C    /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
C    /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
C    /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
C    /IOUCOM/ IOUREP,IOUERR,IOUASK
C    /PROJCM/ PROJID
C    /SYSCOM/ INITPR
C
C  Local array subscripts:
C
C  IOUCHG(9)  -  IOUCHG ( JU )
C  IOUOLD(3)  -  IOUOLD ( JOU )
C  IOUREF(9)  -  IOUREF ( JU )
C  NAMFLG(13) -  NAMFLG ( IFG )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  FLGERR   I    number of flag values found to be out of range
C  INFORM   I    dummy variable: QUITER call purpose is to write out run
C                'inform'ation, not an error or a warning message
C  IOUCHG   I    user entered changes to output unit assignments
C  IOUOLD   I    output unit numbers to be used this run
C  IOUREF   I    character representations of i/o unit numbers 1 - 9
C  IOUSUM   I    sum of acceptable changed i/o unit numbers
C  IPRSAV   I    backup of entered IPROMT - used in QUITER if out of range
C  JUNIT    I    potential numeric match to entered character for unit change
C  MDEFLG   I    decides prompt & read format for Control Section flags:
C                  1 = vertical format     2 = horizontal format
C  NAMFLG   R*8  flag names for prompts
C
C  Notes:
C
C  Major MOBILE3 changes to the control flag processing section are:
C  Deleted all code related to flags INFLAG, TRKFLG & UNFFLG.
C  Added code to process TAMFLG and ATPFLG (new input option flags).
C  Added call to new subroutine GETAER.  NEWDAT call is now GETIMC call.
C  Removed and replaced IOPTN with ITEST and ICUTS in IMFLAG processing.
C  ALTFLG was renamed to NEWFLG and IMFLG to IMFLAG.
C
```

```
C
      INTEGER TAMFLG,SPDFLG,VMFLAG,ALHFLG,ATPFLG,PRTFLG
C
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /PROJCM/ PROJID(20)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
C
      INTEGER FLGERR
      DIMENSION IOUREF(9),IOUOLD(3),IOUCHG(3)
      REAL*8 NAMFLG(13)
C
      EQUIVALENCE
     *   (IOUOLD(1),IOUREP),    (IOUOLD(2),IOUERR),    (IOUOLD(3),IOUASK)
C
      DATA FLGERR/0/
      DATA IOUREF/
     *   '1   ','2   ','3   ','4   ','5   ','6   ','7   ','8   ','9   '/
C
      DATA NAMFLG/' TAMFLG:',
     *' SPDFLG:',' VMFLAG:',' MYMRFG:',' NEWFLG:',' IMFLAG:',' ALHFLG:',
     *' ATPFLG:',' IFORM: ',' PRTFLG:',' ICEVFG:',' IDLFLG:',' NMHFLG:'/
C
C  Read in prompt/mode flag and output unit changes (if any).
C
      READ(IOUGEN,100,END=99) IPROMT,IOUCHG
  100 FORMAT(I1,3A1)
C
C  Output unit numbers parsed here.
C
C  Change alphanumeric to numeric values.
C
      DO 20 JOU=1,3
C
C  Test for allowed values (no input units).
C
      DO 10 JU=1,9
      IF(JU.EQ.IOUAER.OR.JU.EQ.IOUIMD.OR.JU.EQ.IOUGEN) GOTO 10
      JUNIT=JU
      IF(IOUCHG(JOU).EQ.IOUREF(JU)) GOTO 15
   10 CONTINUE
C
C  Set default for unrecognized value.
C
      JUNIT=0
   15 IOUCHG(JOU)=JUNIT
   20 CONTINUE
C
C  Assign output units.
C
      IOUSUM=0
      DO 25 JOU=1,3
      IOUSUM=IOUCHG(JOU)+IOUSUM
      IF(IOUCHG(JOU).GT.0) IOUOLD(JOU)=IOUCHG(JOU)
   25 CONTINUE
C
```

```
C  Parse prompt/mode flag here.
C
C  Save input flag for future possible abort.
C
      IPRSAV=IPROMT
      IF(IPROMT.GE.1.AND.IPROMT.LE.4) GOTO 30
C
C  Abort will happen due to prompt/mode flag error.
C  Collect title for id of possible multiple units.
C
      IPROMT=1
      WRITE(IOUASK,210)
      READ(IOUGEN,110,END=99) PROJID
      GOTO 60
C
C  Parse prompt/mode flag.
C
   30 MDEFLG=1
      IF(IPROMT.GE.3)MDEFLG=2
      IPROMT=MOD(IPROMT-1,2)+1
C
C  Read title.
C
   55 IF(IPROMT.EQ.2) WRITE(IOUASK,210)
  210 FORMAT('0','Enter project id:')
      READ(IOUGEN,110,END=99) PROJID
  110 FORMAT(20A4)
C
C  If error unit no longer same as report unit, write run title to it.
C
   60 IF(IOUREP.NE.IOUERR) CALL OUTHDR(IOUERR)
C
C  Display unit number values if changed.
C
      IF(IOUSUM.GT.0) CALL QUITER(0.,0,71,INFORM)
      IF(IPROMT.EQ.2.AND.IOUASK.NE.IOUREP.AND.IOUASK.NE.IOUERR)
     *   CALL OUTHDR(IOUASK)
C
C  Reset INITPR so that subsequent branch check in OUTPUT will succeed.
C
      INITPR=1
C
C  Test IPRSAV (= entered IPROMT value).  Out-of-range => run stops.
C
      IF(IPRSAV.LT.1.OR.IPRSAV.GT.4) CALL QUITER(0.,IPRSAV,2,FLGERR)
C
      IF(MDEFLG.EQ.2) GOTO 65
C
C  Read flags via vertical input mode.
C
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(1)
      READ(IOUGEN,120,END=99) TAMFLG
      IF(TAMFLG.LT.1.OR.TAMFLG.GT.2) CALL QUITER(0.,TAMFLG,3,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(2)
      READ(IOUGEN,120,END=99) SPDFLG
      IF(SPDFLG.LT.1.OR.SPDFLG.GT.2) CALL QUITER(0.,SPDFLG,4,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(3)
      READ(IOUGEN,120,END=99) VMFLAG
```

```
      IF(VMFLAG.LT.1.OR.VMFLAG.GT.3) CALL QUITER(0.,VMFLAG,5,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(4)
      READ(IOUGEN,120,END=99) MYMRFG
      IF(MYMRFG.LT.1.OR.MYMRFG.GT.4) CALL QUITER(0.,MYMRFG,6,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(5)
      READ(IOUGEN,120,END=99) NEWFLG
      IF(NEWFLG.LT.1.OR.NEWFLG.GT.2) CALL QUITER(0.,NEWFLG,7,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(6)
      READ(IOUGEN,120,END=99) IMFLAG
      IF(IMFLAG.LT.1.OR.IMFLAG.GT.2) CALL QUITER(0.,IMFLAG,8,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(7)
      READ(IOUGEN,120,END=99) ALHFLG
      IF(ALHFLG.LT.1.OR.ALHFLG.GT.3) CALL QUITER(0.,ALHFLG,9,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(8)
      READ(IOUGEN,120,END=99) ATPFLG
      IF(ATPFLG.LT.1.OR.ATPFLG.GT.2) CALL QUITER(0.,ATPFLG,10,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(9)
      READ(IOUGEN,120,END=99) IFORM
      IF(IFORM.LT.1.OR.IFORM.GT.4) CALL QUITER(0.,IFORM,11,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(10)
      READ(IOUGEN,120,END=99) PRTFLG
      IF(PRTFLG.LT.1.OR.PRTFLG.GT.4) CALL QUITER(0.,PRTFLG,12,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(11)
      READ(IOUGEN,120,END=99) ICEVFG
      IF(ICEVFG.LT.1.OR.ICEVFG.GT.4) CALL QUITER(0.,ICEVFG,13,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(12)
      READ(IOUGEN,120,END=99) IDLFLG
      IF(IDLFLG.LT.1.OR.IDLFLG.GT.2) CALL QUITER(0.,IDLFLG,14,FLGERR)
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)NAMFLG(13)
      READ(IOUGEN,120,END=99) NMHFLG
      IF(NMHFLG.LT.1.OR.NMHFLG.GT.2) CALL QUITER(0.,NMHFLG,15,FLGERR)
C
  120 FORMAT(I1)
  220 FORMAT(' ','Enter',A8)
C
      GOTO 70
C
C  Read flags in via horizontal mode.
C
   65 IF(IPROMT.EQ.2) WRITE(IOUASK,230)
  230 FORMAT(' ','Enter TAMFLG, SPDFLG, VMFLAG, MYMRFG, NEWFLG, IMFLAG,'
     *,' ALHFLG,'/' ','ATPFLG, IFORM, PRTFLG, ICEVFG, IDLFLG & NMHFLG')
      READ(IOUGEN,130,END=99) TAMFLG,SPDFLG,VMFLAG,MYMRFG,NEWFLG,
     *     IMFLAG,ALHFLG,ATPFLG,IFORM,PRTFLG,ICEVFG,IDLFLG,NMHFLG
  130 FORMAT(I1,12(1X,I1))
      IF(TAMFLG.LT.1.OR.TAMFLG.GT.2) CALL QUITER(0.,TAMFLG,3,FLGERR)
      IF(SPDFLG.LT.1.OR.SPDFLG.GT.2) CALL QUITER(0.,SPDFLG,4,FLGERR)
      IF(VMFLAG.LT.1.OR.VMFLAG.GT.3) CALL QUITER(0.,VMFLAG,5,FLGERR)
      IF(MYMRFG.LT.1.OR.MYMRFG.GT.4) CALL QUITER(0.,MYMRFG,6,FLGERR)
      IF(NEWFLG.LT.1.OR.NEWFLG.GT.2) CALL QUITER(0.,NEWFLG,7,FLGERR)
      IF(IMFLAG.LT.1.OR.IMFLAG.GT.2) CALL QUITER(0.,IMFLAG,8,FLGERR)
      IF(ALHFLG.LT.1.OR.ALHFLG.GT.3) CALL QUITER(0.,ALHFLG,9,FLGERR)
      IF(ATPFLG.LT.1.OR.ATPFLG.GT.2) CALL QUITER(0.,ATPFLG,10,FLGERR)
      IF(IFORM.LT.1.OR.IFORM.GT.4) CALL QUITER(0.,IFORM,11,FLGERR)
      IF(PRTFLG.LT.1.OR.PRTFLG.GT.4) CALL QUITER(0.,PRTFLG,12,FLGERR)
      IF(ICEVFG.LT.1.OR.ICEVFG.GT.4) CALL QUITER(0.,ICEVFG,13,FLGERR)
      IF(IDLFLG.LT.1.OR.IDLFLG.GT.2) CALL QUITER(0.,IDLFLG,14,FLGERR)
      IF(NMHFLG.LT.1.OR.NMHFLG.GT.2) CALL QUITER(0.,NMHFLG,15,FLGERR)
```

```
C
C  1 or more flag values out of range => warn user & then stop run.
C
   70 IF(FLGERR.GT.0) CALL QUITER(0.,0,53,FLGERR)
      RETURN
C
C  EOF on any attempted read => take alternate return 1 => run aborts.
C
   99 RETURN1
      END
```

```
      SUBROUTINE ONESEC(INERR,*)
C
C ONESEC checks if control flags indicate One-time Data. It then reads in,
C validates, and stores the data.
C
C Called by MAIN.
C
C Calls CCEVAX, GETATP, GETIMC, GETVMT, NEWERQ, QUITER and YRTEST.
C
C Input on call:
C
C   parameter list: INERR
C   common blocks:
C   /FLAGS1/ IPROMT,TAMFLG,VMFLAG
C   /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ATPFLG
C   /FLAGS3/ ICEVFG
C   /IOUCOM/ IOUGEN,IOUASK
C   /SYSCOM/ MAXVEH
C   /YEARS4/ IY1941,IY1960,IY2020
C
C Output on return:
C
C   parameter list: INERR
C   common blocks:
C   /BASETR/ ZMLTAM,DRTAM
C   /CEVCOM/ USRTPD,USRMPD
C   /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
C   /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME
C   /MYRSAV/ AMAR,JULMYR
C   /NEWCOM/ NEWPAR,BERNEW,NEWFIT,NEWCT
C
C Local array subscripts:
C
C NAMMMR(2,2,8)  -  NAMMMR ( ICH, IG, IV )
C
C Local variable / array dictionary:
C
C  Name   Type              Description
C ------  ----  -------------------------------------------------------
C CHKMYR   R    myr mix check: sum of the myr fractions = 1.0 +/- 1.E-6
C                (a normalized myr distribution has been entered for each IV)
C DRNEW    R    new emission rate's deterioration rate (slope)
C MYF      I    my of first (JDX order) AMAR / JULMYR to be entered on READ
C MYL      I    my of last (JDX order) AMAR / JULMYR to be entered on READ
C NAMMMR   R*8  prompts for replacement AMAR & JULMYR, by JDX & IV
C NEWMYF   I    new emission rate's first my of affected range
C NEWMYL   I    new emission rate's last my of affected range
C NEWPOL   I    new emission rate's pollutant code
C NEWREG   I    new emission rate's region code
C NEWVEH   I    new emission rate's vehicle type code
C SUMMYR   R    sum of myr for IV; used to normalize user entered JULMYR
C ZEROML   R    user entered tampering zml to be checked: ZEROML <= 1.0
C ZMLNEW   R    new emission rate's zero mile level (intercept)
C
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG,ALHFLG,ATPFLG,PRTFLG
      REAL JULMYR
```

```
C
      COMMON /BASETR/ BTR(7,2),ZMLTAM(7,2,4),DRTAM(7,2,4)
      COMMON /CEVCOM/ USRTPD(8),USRMPD(8)
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
      COMMON /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME(20,9)
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /MYRSAV/ AMAR(20,8),JULMYR(20,8),NEWCUM
      COMMON /NEWCOM/ NEWPAR(5,100),BERNEW(2,100),NEWFIT(100),NEWCT
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /YEARS4/ IY1941,IY1960,IY2020
C
      REAL*8 NAMMMR(2,2,8)
C
      DATA NAMMMR/
     *   '1-10 for',' LDGV:  ',
     *   '11-20 fo','r LDGV: ',
     *   '1-10 for',' LDGT1: ',
     *   '11-20 fo','r LDGT1:',
     *   '1-10 for',' LDGT2: ',
     *   '11-20 fo','r LDGT2:',
     *   '1-10 for',' HDGV:  ',
     *   '11-20 fo','r HDGV: ',
     *   '1-10 for',' LDDV:  ',
     *   '11-20 fo','r LDDV: ',
     *   '1-10 for',' LDDT:  ',
     *   '11-20 fo','r LDDT: ',
     *   '1-10 for',' HDDV:  ',
     *   '11-20 fo','r HDDV: ',
     *   '1-10 for',' MC:    ',
     *   '11-20 fo','r MC:   '/
C
C  Process flags.
C
      IF(TAMFLG.EQ.1) GOTO 20
      IF(IMFLAG.EQ.2) GOTO 10
C
      IF(IPROMT.EQ.2) WRITE(IOUASK,200)
  200 FORMAT(' ','Enter tampering intercepts (zero mile levels)')
      IF(IPROMT.EQ.2) WRITE(IOUASK,205)
  205 FORMAT(' ','for non-I/M case only:')
      READ(IOUGEN,100,END=99) ((ZMLTAM(ID,1,IVTAM),ID=1,7),IVTAM=1,4)
  100 FORMAT(7F8.4)
      IF(IPROMT.EQ.2) WRITE(IOUASK,210)
  210 FORMAT(' ','Enter tampering slopes (deterioration rates)')
      IF(IPROMT.EQ.2) WRITE(IOUASK,205)
      READ(IOUGEN,110,END=99) ((DRTAM(ID,1,IVTAM),ID=1,7),IVTAM=1,4)
  110 FORMAT(7F9.5)
      GOTO 12
C
   10 IF(IPROMT.EQ.2) WRITE(IOUASK,200)
      IF(IPROMT.EQ.2) WRITE(IOUASK,215)
  215 FORMAT(' ','for non-I/M and I/M cases:')
      READ(IOUGEN,100,END=99) ZMLTAM
      IF(IPROMT.EQ.2) WRITE(IOUASK,210)
      IF(IPROMT.EQ.2) WRITE(IOUASK,215)
```

```
      READ(IOUGEN,110,END=99) DRTAM
C
C  Insure tampering zero mile levels (intercepts) do not exceed unity.
C  There is no range check for deterioration rates.
C
   12 DO 14 IVTAM=1,4
      DO 14 IM=1,IMFLAG
      DO 14 ID=1,7
      ZEROML=ZMLTAM(ID,IM,IVTAM)
      IF(ZEROML.GT.1.0) CALL QUITER(ZEROML,0,50,INERR)
   14 CONTINUE
C
C  Check for user supplied vmt mix to be used for all scenarios of this run.
C
   20 IF(VMFLAG.EQ.3) CALL GETVMT(INERR,&99)
C
C  Check for user supplied my mileage accrual rates and / or registration
C  distributions.
C
      IF(MYMRFG.EQ.1) GOTO 44
      IF(MYMRFG.EQ.3) GOTO 26
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)
  220 FORMAT(/)
C
      DO 22 IV=1,MAXVEH
      DO 22 IG=1,2
      IF(IPROMT.EQ.2) WRITE(IOUASK,230)  (NAMMMR(ICH,IG,IV),ICH=1,2)
  230 FORMAT(' ','Enter MYM ages ',2A8)
      MYF=1
      IF(IG.EQ.2) MYF=11
      MYL=10
      IF(IG.EQ.2) MYL=20
      READ(IOUGEN,130,END=99)  (AMAR(JDX,IV),JDX=MYF,MYL)
  130 FORMAT(10F5.3)
   22 CONTINUE
C
      DO 24 IV=1,MAXVEH
      DO 24 JDX=1,20
      IF(AMAR(JDX,IV).LT.0.) CALL QUITER(AMAR(JDX,IV),0,19,INERR)
   24 CONTINUE
C
      IF(MYMRFG.EQ.2) GOTO 36
   26 IF(IPROMT.EQ.2) WRITE(IOUASK,220)
      DO 32 IV=1,MAXVEH
      DO 28 IG=1,2
      IF(IPROMT.EQ.2) WRITE(IOUASK,235)  (NAMMMR(ICH,IG,IV),ICH=1,2)
  235 FORMAT(' ','Enter MYR ages ',2A8)
      MYF=1
      IF(IG.EQ.2) MYF=11
      MYL=10
      IF(IG.EQ.2) MYL=20
      READ(IOUGEN,130,END=99)  (JULMYR(JDX,IV),JDX=MYF,MYL)
   28 CONTINUE
C
      CHKMYR=0.0
      DO 30 JDX=1,20
      CHKMYR=JULMYR(JDX,IV)+CHKMYR
   30 CONTINUE
```

```
C
      IF(CHKMYR-.00001.GT.1..OR.CHKMYR+.00001.LT.1.)
     * CALL QUITER(CHKMYR,0,49,INERR)
   32 CONTINUE
C
      DO 34 IV=1,MAXVEH
      DO 34 JDX=1,20
      IF(JULMYR(JDX,IV).LT.0.) CALL QUITER(JULMYR(JDX,IV),0,20,INERR)
   34 CONTINUE
C
C
   36 DO 38 IV=1,MAXVEH
C
C  Skip 0 with non-0 checks if user supplies MYR only and on HDDV pass:
C  the BD values are 0.0's for all 20 my's (HDDMYM has not yet been called).
C
      IF(MYMRFG.EQ.3.AND.IV.EQ.7) GOTO 38
      DO 38 JDX=1,20
      IF(AMAR(JDX,IV).LE.0.0.AND.JULMYR(JDX,IV).GT.0.0)
     *    CALL QUITER(JULMYR(JDX,IV),0,21,INERR)
      IF(AMAR(JDX,IV).GT.0.0.AND.JULMYR(JDX,IV).EQ.0.0)
     *    CALL QUITER(AMAR(JDX,IV),0,22,INERR)
   38 CONTINUE
C
C  Check vehicle equalities (LDGV,LDDV), (LDGT1,LDDT) mod yr regs.
C
      DO 40 JDX=1,20
      IF(JULMYR(JDX,1).NE.JULMYR(JDX,5)) CALL QUITER(0.,JDX,65,INERR)
      IF(JULMYR(JDX,2).NE.JULMYR(JDX,6)) CALL QUITER(0.,JDX,66,INERR)
   40 CONTINUE
C
C  Normalize JULMYR.
C
   44 DO 50 IV=1,MAXVEH
C
      SUMMYR=0.0
      DO 46 JDX=1,20
      SUMMYR=JULMYR(JDX,IV)+SUMMYR
   46 CONTINUE
      IF(SUMMYR.EQ.0.) SUMMYR=1.
C
      DO 50 JDX=1,20
      JULMYR(JDX,IV)=JULMYR(JDX,IV)/SUMMYR
   50 CONTINUE
C
C  Here read in e.f. modification data.
C
      IF(NEWFLG.EQ.1) GOTO 60
      IF(IPROMT.EQ.2) WRITE(IOUASK,240)
  240 FORMAT('0','Enter no. of new e.f. intercept/slope pairs (I2)')
      READ(IOUGEN,140,END=99) NEWCT
  140 FORMAT(I2)
      IF(NEWCT.LT.1.OR.NEWCT.GT.100) CALL QUITER(0.,NEWCT,23,INERR)
C
      DO 55 IFAC=1,NEWCT
      IF(IPROMT.EQ.2) WRITE(IOUASK,250)
  250 FORMAT(' ','Enter region,veh. type,pollutant,first my,'/
     * ' ','last my,new intercept (A), and new slope (B)')
```

```
      READ(IOUGEN,150,END=99) NEWREG,NEWVEH,NEWPOL,
     *  NEWMYF,NEWMYL,ZMLNEW,DRNEW
  150 FORMAT(I1,1X,I1,1X,I1,1X,I2,1X,I2,1X,F6.2,1X,F6.2)
      IF(NEWREG.NE.1.AND.NEWREG.NE.2)
     *   CALL QUITER(0.,NEWREG,62,INERR)
      IF(NEWVEH.LT.1.OR.NEWVEH.GT.8) CALL QUITER(0.,NEWVEH,25,INERR)
      IF(NEWPOL.LT.1.OR.NEWPOL.GT.3) CALL QUITER(0.,NEWPOL,26,INERR)
      CALL YRTEST(NEWMYF,27,IY1941,IY2020,INERR)
      CALL YRTEST(NEWMYL,28,IY1941,IY2020,INERR)
      IF(NEWMYL.LT.NEWMYF) CALL QUITER(0.,0,29,INERR)
      IF(ZMLNEW.LE.0.) CALL QUITER(ZMLNEW,0,30,INERR)
      IF(DRNEW.LT.0.) CALL QUITER(DRNEW,0,31,INERR)
C
C  Store alternate equation data.
C
      NEWPAR(1,IFAC)=NEWREG
      NEWPAR(2,IFAC)=NEWVEH
      NEWPAR(3,IFAC)=NEWPOL
      NEWPAR(4,IFAC)=NEWMYF
      NEWPAR(5,IFAC)=NEWMYL
      BERNEW(1,IFAC)=ZMLNEW
      BERNEW(2,IFAC)=DRNEW
   55 CONTINUE
      CALL NEWERQ(INERR)
C
C  If IMFLAG=2, read in I/M program parameters.
C
   60 IF(IMFLAG.EQ.1) GOTO 70
      NLIM=0
      IF(IPROMT.EQ.2) WRITE(IOUASK,260)
  260 FORMAT('0','Enter year I/M begins, stringency, m.t. flag,'/
     *  ' ','first model year and last model year of prog. benefits,'/
     *  ' ','vehicle, test type, cutpoints and newdata flags')
      READ(IOUGEN,160,END=99)
     *   ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2,ILDT,ITEST,ICUTS,NUDATA
  160 FORMAT(2(I2,1X),I1,1X,2(I2,1X),3(I1,1X),I1)
C
C  Check I/M inputs.
C
      CALL YRTEST(ICYIM,32,IY1960,IY2020,INERR)
      IF(ISTRIN.LT.10.OR.ISTRIN.GT.50) CALL QUITER(0.,ISTRIN,33,INERR)
      IF(IMTFLG.LT.1.OR.IMTFLG.GT.2) CALL QUITER(0.,IMTFLG,34,INERR)
      CALL YRTEST(MODYR1,35,IY1941,IY2020,INERR)
      CALL YRTEST(MODYR2,36,IY1941,IY2020,INERR)
      IF(MODYR1.GT.MODYR2) CALL QUITER(0.,0,37,INERR)
      IF(ILDT.LT.1.OR.ILDT.GT.4) CALL QUITER(0.,ILDT,72,INERR)
      IF(ITEST.LT.1.OR.ITEST.GT.3) CALL QUITER(0.,ITEST,73,INERR)
      IF(ICUTS.LT.1.OR.ICUTS.GT.3) CALL QUITER(0.,ICUTS,82,INERR)
      IF(NUDATA.LT.1.OR.NUDATA.GT.4) CALL QUITER(0.,NUDATA,74,INERR)
      IF(NUDATA.GT.1) CALL GETIMC(&99)
C
C  Anti-tampering program => get parameters and effectiveness rates.
C
   70 IF(ATPFLG.EQ.2) CALL GETATP(INERR,&99)
C
      IF(ICEVFG.LT.3) GOTO 90
C
C  Read trips/day and miles/day.
```

```
C
      IF(IPROMT.EQ.2) WRITE(IOUASK,270)
  270 FORMAT('0','Enter average trips/day')
      READ(IOUGEN,170,END=99) USRTPD
  170 FORMAT(8F5.1)
C
      DO 80 IV=1,MAXVEH
      IF(USRTPD(IV).LT.0.) CALL QUITER(USRTPD(IV),0,54,INERR)
   80 CONTINUE
C
      IF(IPROMT.EQ.2) WRITE(IOUASK,280)
  280 FORMAT('0','Enter average miles/day')
      READ(IOUGEN,170,END=99) USRMPD
C
      DO 85 IV=1,MAXVEH
      IF(USRMPD(IV).LT.0.) CALL QUITER(USRMPD(IV),0,55,INERR)
   85 CONTINUE
      CALL CCEVAX
   90 RETURN
C
C  EOF on any attempted read => take alternate return 1 => run aborts.
C
   99 RETURN1
      END
```

```
      SUBROUTINE PARSEC(ICY,INERR,*)
C
C  PARSEC reads in the Parameter Section variables and validates them.
C
C  Called by MAIN.
C
C  Calls FLOAT, GETVMT, IFIX, QUITER and YRTEST.  FLOAT & IFIX are FORTRAN
C  library functions.
C
C  Input on call:
C
C    parameter list: INERR
C    common blocks:
C    /FLAGS1/ IPROMT,SPDFLG,VMFLAG
C    /FLAGS2/ ALHFLG
C    /IOUCOM/ IOUGEN,IOUASK
C    /SYSCOM/ MAXVEH,MAXLTW
C    /YEARS4/ IY1960,IY2020
C
C  Output on return:
C
C    parameter list: ICY,INERR
C    common blocks:
C    /LNKCOM/ SPD,AMBT,PCCN,PCHC,PCCC
C    /REGCOM/ IREJN,ALT
C    /XCFS1/  AC,XLOAD,TRAILR,ABSHUM,DB,WB
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  NSPDS    I    number of speeds entered by user for current scenario:
C                  SPDFLG = 1 => NSPDS = 1;  SPDFLG = 2 => NSPDS = 8
C  OPCHK1   R    operating modes check 1: 0.0 <= PCHC + PCCC <= 100.
C  OPCHK2   R    operating modes check 2: 0.0 <= PCHC + PCCC - PCCN <= 100.
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG,ALHFLG,ATPFLG
C
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /REGCOM/ IREJN,ALT
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /XCFS1/  AC,XLOAD(3),TRAILR(3),ABSHUM,DB,WB
      COMMON /YEARS4/ IY1941,IY1960,IY2020
C
C  PARSEC is called once for each scenario of the run.
C
C  Get scenario record.
C
      IF(SPDFLG.EQ.2) GOTO 20
      NSPDS=1
      IF(IPROMT.EQ.2) WRITE(IOUASK,200)
  200 FORMAT('0','Enter region, CY,SPD(1),AMBT,PCCN,PCHC,PCCC: ')
      READ(IOUGEN,100,END=99) IREJN,ICY,SPD(1),AMBT,PCCN,PCHC,PCCC
  100 FORMAT(I1,1X,I2,5(1X,F4.1))
```

```
C
      DO 10 IV=2,MAXVEH
      SPD(IV)=SPD(1)
   10 CONTINUE
      GOTO 30
C
   20 NSPDS=MAXVEH
      IF(IPROMT.EQ.2) WRITE(IOUASK,220)
  220 FORMAT('0','Enter region, CY,SPD(8),AMBT,PCCN,PCHC,PCCC: ')
      READ(IOUGEN,120,END=99) IREJN,ICY,SPD,AMBT,PCCN,PCHC,PCCC
  120 FORMAT(I1,1X,I2,12(1X,F4.1))
C
   30 IF(IREJN.EQ.3.AND.IPROMT.EQ.2) WRITE(IOUASK,230)
  230 FORMAT('0','Enter altitude:')
      IF(IREJN.EQ.3) READ(IOUGEN,130,END=99) ALT
  130 FORMAT(F6.0)
C
C  Validate inputs.
C
      IF(IREJN.LT.1.OR.IREJN.GT.3) CALL QUITER(0.,IREJN,24,INERR)
C
C  ICY read in as last 2 digits of calendar year.  Call YRTEST to both
C  convert the value to a 4 digit year and validate the result is in-range.
C
      CALL YRTEST(ICY,38,IY1960,IY2020,INERR)
C
C  Check input speed(s).
C
      DO 40 IV=1,NSPDS
      IF(SPD(IV).LE.0.) CALL QUITER(SPD(IV),0,39,INERR)
      IF(SPD(IV).LT.5.) CALL QUITER(SPD(IV),0,52,INERR)
      IF(SPD(IV).GT.0.0.AND.SPD(IV).LT.5.) SPD(IV)=5.
      IF(SPD(IV).GT.55.) CALL QUITER(SPD(IV),0,16,INERR)
      IF(SPD(IV).GT.55.) SPD(IV)=55.
   40 CONTINUE
C
      AMBT=FLOAT(IFIX(AMBT+.5))
      IF(AMBT.LT.0..OR.AMBT.GT.110.) CALL QUITER(AMBT,0,40,INERR)
      IF(PCCN.LT.0..OR.PCCN.GT.100.) CALL QUITER(PCCN,0,41,INERR)
      IF(PCHC.LT.0..OR.PCHC.GT.100.) CALL QUITER(PCHC,0,42,INERR)
      IF(PCCC.LT.0..OR.PCCC.GT.100.) CALL QUITER(PCCC,0,43,INERR)
      OPCHK1=PCHC+PCCC
      IF(OPCHK1.LT.0..OR.OPCHK1.GT.100.) CALL QUITER(OPCHK1,0,63,INERR)
      OPCHK2=OPCHK1-PCCN
      IF(OPCHK2.LT.0..OR.OPCHK2.GT.100.) CALL QUITER(OPCHK2,0,64,INERR)
C
C  Set default altitude (treat region 3 as region 1 when done).
C
      IF(IREJN.EQ.1) ALT=500.
      IF(IREJN.EQ.2) ALT=5500.
      IF(ALT.LT.-200..OR.ALT.GT.10000.) CALL QUITER(ALT,0,58,INERR)
C
C  Check for user supplied vmt mix to be used for this scenario only.
C
      IF(VMFLAG.EQ.2) CALL GETVMT(INERR,&99)
C
C  Here read in ALUH parameters.
C  Assign db/wb default temperatures for a/c usage (90% for defaults).
```

```
C
      DB=85.
      WB=75.
      IF(ALHFLG.EQ.1) GOTO 90
      IF(ALHFLG.EQ.3) GOTO 60
C
      IF(IPROMT.EQ.2) WRITE(IOUASK,240)
  240 FORMAT('O','Enter AC,XLOAD(3),TRAILR(1),ABSHUM')
      READ(IOUGEN,140,END=99) AC,XLOAD,TRAILR(1),ABSHUM
  140 FORMAT(6F4.3)
C
      DO 50 IVP=2,MAXLTW
      TRAILR(IVP)=TRAILR(1)
   50 CONTINUE
      GOTO 70
C
   60 IF(IPROMT.EQ.2) WRITE(IOUASK,250)
  250 FORMAT('O','Enter AC,XLOAD(3),TRAILR(3),ABSHUM,DBTEMP,WBTEMP')
      READ(IOUGEN,150,END=99) AC,XLOAD,TRAILR,ABSHUM,DB,WB
  150 FORMAT(8F4.3,2F4.1)
C
C  Validate inputs for ALUH.
C
   70 IF(AC.LT.0..OR.AC.GT.1.) CALL QUITER(AC,0,44,INERR)
      IF(AC.GT.0.) CALL QUITER(0.,0,56,INERR)
C
      DO 80 IVP=1,MAXLTW
      IF(XLOAD(IVP).LT.0.0.OR.XLOAD(IVP).GT.1.)
     *   CALL QUITER(XLOAD(IVP),0,45,INERR)
      IF(TRAILR(IVP).LT.0.0.OR.TRAILR(IVP).GT.1.)
     *   CALL QUITER(TRAILR(IVP),0,46,INERR)
   80 CONTINUE
C
      IF(ABSHUM.LT.20..OR.ABSHUM.GT.140.) CALL QUITER(ABSHUM,0,47,INERR)
C
      IF(DB.LT.0..OR.DB.GT.110.) CALL QUITER(DB,0,40,INERR)
      IF(WB.LT.0..OR.WB.GT.110.) CALL QUITER(WB,0,40,INERR)
      IF(WB.GT.DB) CALL QUITER(0.,0,57,INERR)
   90 RETURN
C
C  EOF on any attempted read => take alternate return 1 => run aborts.
C
   99 RETURN1
      END
```

```
      SUBROUTINE GETVMT(INERR,*)
C
C  GETVMT gets the fleet vehicle miles travelled (vmt) mix by vehicle type.
C
C  Called by ONESEC and PARSEC.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: INERR
C    common blocks:
C    /FLAGS1/ IPROMT
C    /IOUCOM/ IOUGEN,IOUASK
C    /SYSCOM/ MAXVEH
C
C  Output on return:
C
C    common block: /VMXCOM/ VMTMIX
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  VMTCHK   R    vmt mix check: sum of the vmt fractions = 1.0 +/- 1.E-6
C                (i.e., a normalized vmt distribution has been entered)
C
C  Notes:
C
C  GETVMT is a new subprogram (added for MOBILE3).
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG
C
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /VMXCOM/ VMTMIX(8)
C
      IF(IPROMT.EQ.2) WRITE(IOUASK,200)
  200 FORMAT('0','Enter VMT split:')
      READ(IOUGEN,100,END=99) VMTMIX
  100 FORMAT(8F4.3)
C
      VMTCHK=0.0
      DO 10 IV=1,MAXVEH
      VMTCHK=VMTMIX(IV)+VMTCHK
      IF(VMTMIX(IV).LT.0.0.OR.VMTMIX(IV).GT.1.)
     *      CALL QUITER(VMTMIX(IV),0,17,INERR)
   10 CONTINUE
      IF(VMTCHK+1.E-6.LT.1..OR.VMTCHK-1.E-6.GT.1.)
     *  CALL QUITER(VMTCHK,0,18,INERR)
C
      RETURN
C
C  EOF on any attempted read => take alternate return 1 => run aborts.
C
   99 RETURN1
```

```
5058        END
```

```
      SUBROUTINE YRTEST(IY,NERR,IY1,IY2,INERR)
C
C  YRTEST converts 2-digit input year to 4-digit year.
C
C  Called by GETATP, ONESEC and PARSEC.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: IY,NERR,IY1,IY2,INERR
C
C  Output on return:
C
C    parameter list: IY,INERR
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  II       I    IY converted to 4 digit year
C
C
      II=IY+1900
      IF(IY.LT.50) II=IY+2000
      IF(IY.LT.0.OR.II.LT.IY1.OR.II.GT.IY2)
     *   CALL QUITER(0.,IY,NERR,INERR)
      IY=II
      RETURN
      END
```

```
      SUBROUTINE NEWERQ(INERR)
C
C NEWERQ attempts to store the user-supplied specifications for new FTP basic
C emission rate equations and when successful (i.e., when room found in the
C rate arrays), zeroes out all idle coefficients for the specified pollutant,
C vehicle and region combination.
C
C Called by ONESEC.
C
C Calls IERPTR and QUITER.
C
C Input on call:
C
C   parameter list: INERR
C   common blocks:
C   /NEWCOM/ NEWPAR,BERNEW,NEWCT
C   /NEWEQU/ MAXEQU
C
C Output on return:
C
C   parameter list: INERR
C   common blocks:
C   /BEFCMD/ DRBEF
C   /BEFCMZ/ ZMLBEF
C   /ERQCOM/ MYGERQ
C   /IDLCMD/ DRIDL
C   /IDLCMZ/ ZMLIDL
C   /NEWCOM/ NEWFIT
C
C Notes:
C
C The dimensions of the emission rate equation arrays MYGERQ, ZMLBEF, DRBEF,
C ZMLIDL, and DRIDL were raised from 15 to 20 to allow the new MAXEQU = 20.
C
C
      COMMON /BEFCMD/ DRBEF(20,3,8,2)
      COMMON /BEFCMZ/ ZMLBEF(20,3,8,2)
      COMMON /ERQCOM/ MYGERQ(20,2,3,8,2)
      COMMON /IDLCMD/ DRIDL(20,3,8,2)
      COMMON /IDLCMZ/ ZMLIDL(20,3,8,2)
      COMMON /NEWCOM/ NEWPAR(5,100),BERNEW(2,100),NEWFIT(100),NEWCT
      COMMON /NEWEQU/ MAXEQU
C
      DO 30 IFAC=1,NEWCT
      NEWFIT(IFAC)=0
      IR=NEWPAR(1,IFAC)
      IV=NEWPAR(2,IFAC)
      IP=NEWPAR(3,IFAC)
      IERNEW=IERPTR(0,IP,IV,IR)
C
      IF(IERNEW.NE.0) GOTO 10
      CALL QUITER(0.,IFAC,51,INERR)
      GOTO 30
C
   10 MYGERQ(IERNEW,1,IP,IV,IR)=NEWPAR(4,IFAC)
      MYGERQ(IERNEW,2,IP,IV,IR)=NEWPAR(5,IFAC)
      ZMLBEF(IERNEW,IP,IV,IR)=BERNEW(1,IFAC)
      DRBEF(IERNEW,IP,IV,IR)=BERNEW(2,IFAC)
```

```
      NEWFIT(IFAC)=1
C
C  Warn user and then zero out all idle coefficients for the altered
C  (IP,IV,IR) equation case.
C
      CALL QUITER(0.,IFAC,59,INERR)
      DO 20 IEQU=1,MAXEQU
      ZMLIDL(IEQU,IP,IV,IR)=0.0
      DRIDL(IEQU,IP,IV,IR)=0.0
   20 CONTINUE
   30 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE GETIMC(*)
C
C  GETIMC reads in user supplied alternative I/M credits.  GETIMC is called
C  only when IMFLAG = 2 and NUDATA > 1.
C
C  Called by ONESEC.
C
C  Input on call:
C
C    common blocks:
C    /IMPAR2/ NUDATA
C    /IOUCOM/ IOUIMD,IOUERR
C
C  Output on return:
C
C    common blocks:
C    /IMCR12/ CRED12
C    /IMCR4P/ CRED4P
C    /IMPAR2/ NLIM,IMNAME
C
C  Notes:
C
C  Split /IMCOM/ into /IMPAR1/ and /IMPAR2/, corresponding to old lines 1 &
C  2 of /IMCOM/.  Renamed NLINES to NLIM, STRING(18,9) to IMNAME(20,9) and
C  (locally) N to NCH in the IMNAME read statement.  Expanded name I/O formats
C  from 18 to 20 A4, since the descriptive formats are minimally 80 col wide.
C
C
      COMMON /IMCR12/ CRED12(19,20,5,2,2)
      COMMON /IMCR4P/ CRED4P(19,2,7,3,3)
      COMMON /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME(20,9)
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
C
C  Read the number of lines in the I/M credits description.
C
      READ(IOUIMD,100,END=80,ERR=90)NLIM
  100 FORMAT(I1)
C
      IF(NLIM.EQ.0) GOTO 20
C
C  Read I/M program credits file description.
C
      DO 10 LINES=1,NLIM
      READ(IOUIMD,110,END=80,ERR=90) (IMNAME(NCH,LINES),NCH=1,20)
  110 FORMAT(20A4)
   10 CONTINUE
C
C  Read in user supplied I/M credits, for technologies 1/2 or 4+ or both.
C
   20 IF(NUDATA.EQ.2.OR.NUDATA.EQ.4)READ(IOUIMD,120,END=80,ERR=90)CRED12
      IF(NUDATA.GT.2) READ(IOUIMD,120,END=80,ERR=90)CRED4P
  120 FORMAT(19F4.3)
      RETURN
C
   80 WRITE(IOUERR,300)
  300 FORMAT('-','End-of-file return on read of unit IOUIMD',
     *       ' (new I/M credits).  Run aborted.'/'0',' ')
      GOTO 99
```

```
C
   90 WRITE(IOUERR,310)
  310 FORMAT('-','Error return on read of unit IOUIMD',
     *       ' (new I/M credits).  Run aborted.'/'0',' ')
   99 RETURN1
      END
```

```
      SUBROUTINE GETATP(INERR,*)
C
C  GETATP reads in and verifies user supplied anti-tampering program
C  parameters and effectiveness rates.  GETATP is called when ATPFLG = 2.
C
C  Called by ONESEC.
C
C  Input on call:
C
C    parameter list: INERR
C    common blocks:
C    /FLAGS1/ IPROMT
C    /IOUCOM/ IOUAER,IOUASK
C    /YEARS4/ IY1960,IY2020
C
C  Output on return:
C
C    parameter list: INERR
C    common blocks:
C    /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG,NLAT,ATNAME
C    /EGSCAL/ AER
C    /EVPDAT/ EVPAER
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  COLSUM   R    column sum values from AER: each column's sum must be within
C                the closed interval from 0.0 to 1.0.
C  EVP      R    evaporative A-T effectiveness rate: each rate must be within
C                the closed inetrval from 0.0 to 1.0.
C  LVT      I    flag indicating whether or not a vehicle type is covered by
C                the A-T program: value must be either 1 (no) or 2 (yes).
C  RATE     R    A-T effectiveness rate against exhaust emissions: each rate
C                must be within the closed interval from 0.0 to 1.0.
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG
C
      COMMON /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG(4),NLAT,ATNAME(20,9)
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /EVPDAT/ EVPAER(2,2),EVPTGS(3,2,4),EVPEMI(11,3,4)
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /YEARS4/ IY1941,IY1960,IY2020
C
C  Identify program parameters: start year, first year covered, last year
C  covered and vehicle types covered.
C
      IF(IPROMT.EQ.2) WRITE(IOUASK,200)
  200 FORMAT('0','Enter ATP start year, first & last years included,'/
     *          'and vehicle types covered (format = 3I2,4I1):')
      READ(IOUGEN,100,END=80,ERR=90)LAPSY,LAP1ST,LAPLST,LVTFLG
  100 FORMAT(3(I2,1X),4I1)
C
C  Verify parameters:
C
      CALL YRTEST(LAPSY,75,IY1960,IY2020,INERR)
```

```
      CALL YRTEST(LAP1ST,76,IY1960,IY2020,INERR)
      CALL YRTEST(LAPLST,77,IY1960,IY2020,INERR)
C
      DO 10 IVTAM=1,4
      LVT=LVTFLG(IVTAM)
      IF(LVT.LT.1.OR.LVT.GT.2) CALL QUITER(0.,LVT,78,INERR)
   10 CONTINUE
C
C  Read in the number of lines in the AER file description.
C
      READ(IOUAER,110,END=80,ERR=90)NLAT
  110 FORMAT(I1)
C
      IF(NLAT.EQ.0) GOTO 30
C
C  Read anti-tampering program effectiveness rates matrices file description.
C
      DO 20 LINES=1,NLAT
      READ(IOUAER,120,END=80,ERR=90) (ATNAME(NCH,LINES),NCH=1,20)
  120 FORMAT(20A4)
   20 CONTINUE
C
C  Read in effectiveness rates from file attached to unit IOUAER.
C
   30 READ(IOUAER,130,END=80,ERR=90)EVPAER
  130 FORMAT(4F5.2)
      DO 40 IAY=1,2
      DO 40 IHG=1,2
      EVP=EVPAER(IHG,IAY)
      IF(EVP.LT.0.0.OR.EVP.GT.1.0) CALL QUITER(EVP,0,79,INERR)
   40 CONTINUE
C
C  Note: ICOL / IROW here refers to the input file layout of the arrays.
C  In subroutine ATPEFF the labels are switched, to indicate the actual
C  orientation of the matrices in the effectiveness computation process.
C
      READ(IOUAER,140,END=80,ERR=90)AER
  140 FORMAT(11F5.2)
      DO 60 IAY=1,2
      DO 60 IPG=1,2
      DO 60 ICOL=1,11
      COLSUM=0.0
      DO 50 IROW=1,11
      RATE=AER(ICOL,IROW,IPG,IAY)
      IF(RATE.LT.0.0.OR.RATE.GT.1.0) CALL QUITER(RATE,0,80,INERR)
      COLSUM=COLSUM+RATE
   50 CONTINUE
      IF(COLSUM.LT.0.0.OR.COLSUM.GT.1.0) CALL QUITER(COLSUM,0,81,INERR)
   60 CONTINUE
      RETURN
C
   80 WRITE(IOUERR,300)
  300 FORMAT('-','End-of-file return on read of unit IOUAER',
     *       ' (ATP effectiveness rates).  Run aborted.'/'0',' ')
      GOTO 99
C
   90 WRITE(IOUERR,310)
  310 FORMAT('-','Error return on read of unit IOUAER',
```

```
     *       ' (ATP effectiveness rates).  Run aborted.'/'O',' ')
   99 RETURN1
      END
```

```
      SUBROUTINE CCEVAX
C
C  CCEVAX enters user-supplied trip data.  Originally, CCEVAX also computed HC
C  crankcase and evaporative emission factors.  That calculation is now
C  performed by function CCEVRT.
C
C  Called by ONESEC.
C
C  Input on call:
C
C    common blocks:
C    /CEVCOM/ USRTPD,USRMPD
C    /TPDCOM/ MAXTPD
C    /SYSCOM/ MAXVEH,MAXREG
C    /XMPCOM/ MAXXMP
C    /YEARS4/ IY2020
C
C  Output on return:
C
C    common blocks:
C    /TPDCOM/ TPDVAL,MYGTPD
C    /XMPCOM/ XMPVAL,MYGMPD
C
C
      COMMON /CEVCOM/ USRTPD(8),USRMPD(8)
      COMMON /TPDCOM/ MAXTPD,TPDVAL(2,8,2),MYGTPD(2,8,2)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /XMPCOM/ MAXXMP,XMPVAL(2,8,2),MYGMPD(2,8,2)
      COMMON /YEARS4/ IY1941,IY1960,IY2020
C
C  Substitute user-supplied trip data here.
C
      DO 30 IR=1,MAXREG
      DO 30 IV=1,MAXVEH
C
      XMPVAL(1,IV,IR)=USRMPD(IV)
      MYGMPD(1,IV,IR)=IY2020
      DO 10 IG=2,MAXXMP
      XMPVAL(IG,IV,IR)=0.0
      MYGMPD(IG,IV,IR)=0
   10 CONTINUE
C
      TPDVAL(1,IV,IR)=USRTPD(IV)
      MYGTPD(1,IV,IR)=IY2020
      DO 20 IG=2,MAXTPD
      TPDVAL(IG,IV,IR)=0.0
      MYGTPD(IG,IV,IR)=0
   20 CONTINUE
C
   30 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE QUITER(RVALUE,IVALUE,MESSAG,INERR)
C
C  QUITER prints error and warning messages on unit IOUERR.
C
C  Called by CONSEC, CRANKC, DIURNL, EFCALX, GETATP, HOTSOK, IERPTR,
C            IEXMPT, IGEPTR, IGLPTR, IGPPTR, IGSFPT, IGTPTR, IGUPTR,
C            ISPPTR, ISPPT8, ITCPTR, NEWERQ, ONESEC, PARSEC, TFCALX,
C            TPD, XMPD and YRTEST.
C
C  Input on call:
C
C    parameter list: RVALUE,IVALUE,MESSAG,INERR
C    common blocks:
C    /IOUCOM/ IOUREP,IOUERR,IOUASK
C    /NEWCOM/ NEWPAR
C    /NEWEQU/ MAXEQU
C    /YEARS4/ IY1941,IY1960,IY2020
C
C  Output on return:
C
C    parameter list: INERR
C
C  Warning: there is a conditional branch to STOP at statement number 98.
C
C  Local array subscripts:
C
C  IOBMSG(5)  -  IOBMSG ( ICH )
C  NAMFLG(15) -  NAMFLG ( ICH )
C  NAMFNC(16) -  NAMFNC ( ICH )
C  NAMVEH(8)  -  NAMVEH ( IV )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  -------------------------------------------------------
C  IOBMSG   I    character string vector: 'out of bounds for'
C  MAXMES   I    maximum message code value ( = 83 in MOBILE3 release version)
C  MCODE    I    = MESSAG = message code, unless < 0 or > MAXMES => = 1
C  NAMFLG   R*8  control flag names + 'Unknown'
C  NAMFNC   R*8  function names (to identify subprogram source of error)
C  NAMVEH   R*8  vehicle type names
C
C  Notes:
C
C  The error message for the new function ITCPTR was installed.
C  Error/warning code related to INFLAG, TRKFLG & UNFFLG removed and replaced
C  with code for TAMFLG & ATPFLG.  Error code 73 refers to ITEST, not IOPTN.
C  Error codes 82 (refers to ICUTS) and 83 (refers to interpolated altitude)
C  added.  MAXMES accordingly was increased to 83, leaving MESSAG values
C  84-97 available for future additions to QUITER's messages.
C
C
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /NEWCOM/ NEWPAR(5,100),BERNEW(2,100),NEWFIT(100),NEWCT
      COMMON /NEWEQU/ MAXEQU
      COMMON /YEARS4/ IY1941,IY1960,IY2020
C
      DIMENSION IOBMSG(5)
```

```
C
      REAL*8 NAMFLG(15),NAMVEH(8),NAMFNC(16)
C
      DATA NAMFLG/
     *   ' Unknown',
     *   ' IPROMT ',
     *   ' TAMFLG ',
     *   ' SPDFLG ',
     *   ' VMFLAG ',
     *   ' MYMRFG ',
     *   ' NEWFLG ',
     *   ' IMFLAG ',
     *   ' ALHFLG ',
     *   ' ATPFLG ',
     *   ' IFORM  ',
     *   ' PRTFLG ',
     *   ' ICEVFG ',
     *   ' IDLFLG ',
     *   ' NHMFLG '/
C
      DATA NAMVEH/
     *   'LDGV    ',
     *   'LDGT1   ',
     *   'LDGT2   ',
     *   'HDGV    ',
     *   'LDDV    ',
     *   'LDDT    ',
     *   'HDDV    ',
     *   'MC      '/
C
      DATA NAMFNC/
     *   ' HOTSOK ',
     *   ' TPD    ',
     *   ' DIURNL ',
     *   ' XMPD   ',
     *   ' CRANKC ',
     *   ' IGEPTR ',
     *   ' IGUPTR ',
     *   ' IGLPTR ',
     *   ' IGTPTR ',
     *   ' IGPPTR ',
     *   ' IERPTR ',
     *   ' ISPPTR ',
     *   ' ISPPT8 ',
     *   ' IEXMPT ',
     *   ' ITCPTR ',
     *   ' IGSFPT '/
C
      DATA IOBMSG/
     *   '  ou','t of',' bou','nds ','for '/
C
      DATA MAXMES/83/
C
      MCODE=MESSAG
C
C  Trap unknown errors.
C
      IF(MCODE.LT.1.OR.MCODE.GT.MAXMES) MCODE=1
```

```
C
C  Test for warnings.
C
      IF(MCODE.NE.16.AND.MCODE.NE.21.AND.MCODE.NE.22.AND.MCODE.NE.31
     *              .AND.MCODE.NE.49.AND.MCODE.NE.52.AND.MCODE.NE.53
     *              .AND.MCODE.NE.56.AND.MCODE.NE.59.AND.MCODE.NE.71)
     *      WRITE(IOUERR,300)
  300 FORMAT('-',T2,'*** Error:')
C
C  Branch to the appropriate error / warning message.
C
      GOTO(
     *     10, 11, 11, 11, 11, 11, 11, 11, 11, 11,
     *     11, 11, 11, 11, 11, 16, 17, 18, 19, 20,
     *     21, 22, 23, 24, 25, 26, 27, 27, 29, 30,
     *     31, 32, 33, 34, 35, 36, 37, 38, 39, 40,
     *     41, 42, 43, 44, 45, 46, 47, 48, 49, 50,
     *     51, 52, 53, 54, 55, 56, 57, 58, 59, 60,
     *     61, 62, 63, 64, 65, 66, 67, 68, 69, 70,
     *     71, 72, 73, 74, 75, 76, 77, 78, 79, 80,
     *     81, 82, 83
     *        ),MCODE
C
   10 WRITE(IOUERR,310) MESSAG,NAMFLG(MCODE)
  310 FORMAT('+',10X,'Message code ',I4,A8)
      GOTO 98
   11 WRITE(IOUERR,311) IVALUE,IOBMSG,NAMFLG(MCODE)
  311 FORMAT('+',10X,I4,5A4,'flag',A8)
      IF(MCODE.EQ.2) WRITE(IOUERR,312)
  312 FORMAT(' ','Prompt/mode type (1 to 4) must be corrected before',
     *       ' your next run.')
      GOTO 98
   16 WRITE(IOUERR,316) RVALUE
  316 FORMAT(' ','Warning: ',G10.3,' speed reduced to 55 m.p.h.',
     *  ' maximum')
      GOTO 99
   17 WRITE(IOUERR,317) RVALUE,IOBMSG
  317 FORMAT('+',10X,G10.3,5A4,'VMTMIX (0. to 1.)')
      GOTO 98
   18 WRITE(IOUERR,318) RVALUE
  318 FORMAT('+',10X,G10.3,' sum of VMTMIX is not equal to 1.')
      GOTO 98
   19 WRITE(IOUERR,319) RVALUE
  319 FORMAT('+',10X,G10.3,' negative model year mileage')
      GOTO 98
   20 WRITE(IOUERR,320) RVALUE
  320 FORMAT('+',10X,G10.3,' negative model year registration')
      GOTO 98
   21 WRITE(IOUERR,321) RVALUE
  321 FORMAT(' ','Warning: ',G10.3,' registration with zero mileage')
      GOTO 99
   22 WRITE(IOUERR,322) RVALUE
  322 FORMAT(' ','Warning: ',G10.3,' mileage with zero registration')
      GOTO 99
   23 WRITE(IOUERR,323) IVALUE,IOBMSG
  323 FORMAT('+',10X,I4,5A4,'e.f. changes (1 to 100 pairs)')
      GOTO 98
   24 WRITE(IOUERR,324) IVALUE,IOBMSG
```

```
  324 FORMAT('+',10X,I4,5A4,'region (1,2,3 only)')
      GOTO 98
   25 WRITE(IOUERR,325) IVALUE,IOBMSG
  325 FORMAT('+',10X,I4,5A4,'vehicle type (1 to 8)')
      GOTO 98
   26 WRITE(IOUERR,326) IVALUE,IOBMSG
  326 FORMAT('+',10X,I4,5A4,'pollutant (1 to 3)')
      GOTO 98
   27 WRITE(IOUERR,327) IVALUE,IOBMSG,IY1941,IY2020
  327 FORMAT('+',10X,I4,5A4,'year (',I4,' to ',I4,')')
      GOTO 98
   29 WRITE(IOUERR,329)
  329 FORMAT('+',10X,' last year cannot be less than first year')
      GOTO 98
   30 WRITE(IOUERR,330) RVALUE
  330 FORMAT('+',10X,G10.3,' intercept must be positive')
      GOTO 98
   31 WRITE(IOUERR,331) RVALUE
  331 FORMAT(' ','Warning: ',G10.3,' negative slope for ageing vehicle')
      GOTO 99
   32 WRITE(IOUERR,327) IVALUE,IOBMSG,IY1960,IY2020
      GOTO 98
   33 WRITE(IOUERR,333) IVALUE,IOBMSG
  333 FORMAT('+',10X,I4,5A4,'stringency (10 to 50)')
      GOTO 98
   34 WRITE(IOUERR,334) IVALUE,IOBMSG
  334 FORMAT('+',10X,I4,5A4,'mechanics training (1 to 2)')
      GOTO 98
   35 WRITE(IOUERR,335) IVALUE,IOBMSG,IY1941,IY2020
  335 FORMAT('+',10X,I4,5A4,'MODYR1 (',I4,' to ',I4,')')
      GOTO 98
   36 WRITE(IOUERR,336) IVALUE,IOBMSG,IY1941,IY2020
  336 FORMAT('+',10X,I4,5A4,'MODYR2 (',I4,' to ',I4,')')
      GOTO 98
   37 WRITE(IOUERR,337)
  337 FORMAT('+',10X,' MODYR1 cannot be greater than MODYR2')
      GOTO 98
   38 WRITE(IOUERR,327) IVALUE,IOBMSG,IY1960,IY2020
      GOTO 98
   39 WRITE(IOUERR,339) RVALUE
  339 FORMAT('+',10X,G10.3,' speed must be positive')
      GOTO 98
   40 WRITE(IOUERR,340) RVALUE
  340 FORMAT('+',10X,G10.3,' valid temperature is 0-110 deg. (F)')
      GOTO 98
   41 WRITE(IOUERR,341) RVALUE,IOBMSG
  341 FORMAT('+',10X,G10.3,5A4,'PCCN (0. to 100.)')
      GOTO 98
   42 WRITE(IOUERR,342) RVALUE,IOBMSG
  342 FORMAT('+',10X,G10.3,5A4,'PCHC (0. to 100.)')
      GOTO 98
   43 WRITE(IOUERR,343) RVALUE,IOBMSG
  343 FORMAT('+',10X,G10.3,5A4,'PCCC (0. to 100.)')
      GOTO 98
   44 WRITE(IOUERR,344) RVALUE,IOBMSG
  344 FORMAT('+',10X,G10.3,5A4,'AC (0. to 1.)')
      GOTO 98
   45 WRITE(IOUERR,345) RVALUE,IOBMSG
```

```
  345 FORMAT('+',10X,G10.3,5A4,'extra load (0. to 1.)')
      GOTO 98
   46 WRITE(IOUERR,346) RVALUE,IOBMSG
  346 FORMAT('+',10X,G10.3,5A4,'trailers (0. to 1.)')
      GOTO 98
   47 WRITE(IOUERR,347) RVALUE,IOBMSG
  347 FORMAT('+',10X,G10.3,5A4,'humidity (20. to 140.)')
      GOTO 98
   48 WRITE(IOUERR,348) NAMVEH(IVALUE)
  348 FORMAT('+',10X,' there are no sales for vehicle ',A8)
      GOTO 98
   49 WRITE(IOUERR,349) RVALUE
  349 FORMAT(' ','Warning: ',G10.3,' MYR sum not = 1. (will normalize)')
      GOTO 99
   50 WRITE(IOUERR,350) RVALUE,IOBMSG
  350 FORMAT('+',10X,G10.3,5A4,'tampering rate intercept (up to 1.0)')
      GOTO 98
   51 WRITE(IOUERR,351) IVALUE,MAXEQU
  351 FORMAT('+',10X,'equation',I3,' causes more than',I3,
     *       ' allowed for any 1 reg/mode/pol.')
      GOTO 98
   52 WRITE(IOUERR,352) RVALUE
  352 FORMAT(' ','Warning: ',G10.3,' speed increased',
     *                            ' to 5 m.p.h. minimum')
      GOTO 99
   53 WRITE(IOUERR,353)
  353 FORMAT('0','You must correct all flags before you run again.')
      GOTO 98
   54 WRITE(IOUERR,354) RVALUE
  354 FORMAT('+',10X,G10.3,' average trips/day cannot be negative')
      GOTO 98
   55 WRITE(IOUERR,355) RVALUE
  355 FORMAT('+',10X,G10.3,' average miles/day cannot be negative')
      GOTO 98
   56 WRITE(IOUERR,356)
  356 FORMAT(' ','Comment: A/C correction factor will be calculated.'
     *   /' ',T11,'Value of inputted AC usage parameter is ignored.')
      GOTO 99
   57 WRITE(IOUERR,357)
  357 FORMAT('+',10X,'WB temp cannot be greater than DB temp')
      GOTO 98
   58 WRITE(IOUERR,358) RVALUE,IOBMSG
  358 FORMAT('+',10X,G10.3,5A4,'altitude (-200 to 10,000 ft.)')
      GOTO 98
   59 WRITE(IOUERR,359) IVALUE,(NEWPAR(IPAR,IVALUE),IPAR=1,3)
  359 FORMAT(' ','Warning: equation',I3,' zeroes all idle coefficients',
     *   ' (and total) for IR=',I1,', IV=',I1,', IP=',I1)
      GOTO 99
   60 WRITE(IOUERR,360) RVALUE,INERR,NAMFNC(IVALUE)
  360 FORMAT('+',10X,G10.3,' default used for',I5,' in function',A8)
      GOTO 98
   61 WRITE(IOUERR,361) INERR,NAMFNC(IVALUE)
  361 FORMAT('+',10X,' default used for',I5,' in index function',A8)
      GOTO 98
   62 WRITE(IOUERR,362) IVALUE,IOBMSG
  362 FORMAT('+',10X,I4,5A4,'new e.f. region (1,2,3 only)')
      GOTO 98
   63 WRITE(IOUERR,363) RVALUE,IOBMSG
```

```
11290      363 FORMAT('+',10X,G10.3,5A4,'(0. <= PCHC+PCCC <= 100.)')
11291          GOTO 98
11292       64 WRITE(IOUERR,364) RVALUE,IOBMSG
11293      364 FORMAT('+',10X,G10.3,5A4,'(0. <= PCHC+PCCC-PCCN <= 100.)')
11294          GOTO 98
11295       65 WRITE(IOUERR,365) IVALUE
11296      365 FORMAT('+',10X,' MYR of LDDV not equal to LDGV for JDX=',I2)
11297          GOTO 98
11298       66 WRITE(IOUERR,366) IVALUE
11299      366 FORMAT('+',10X,' MYR of LDDT not equal to LDGTI for JDX=',I2)
11300          GOTO 98
11301       67 WRITE(IOUERR,367) NAMVEH(IVALUE)
11302      367 FORMAT('+',10X,' EFFTP>0. and GSF=0. for vehicle ',A8)
11303          GOTO 98
11304       68 WRITE(IOUERR,368) NAMVEH(IVALUE)
11305      368 FORMAT('+',10X,' EFFTP<=0. and VMTMIX>0. for vehicle ',A8)
11306          GOTO 98
11307       69 WRITE(IOUERR,369) NAMVEH(IVALUE)
11308      369 FORMAT('+',10X,' EFIDLE>0. and GSF=0. for vehicle ',A8)
11309          GOTO 98
11310       70 WRITE(IOUERR,370) NAMVEH(IVALUE)
11311      370 FORMAT('+',10X,' EFIDLE<=0. and VMTMIX>0. for vehicle ',A8)
11312          GOTO 98
11313       71 WRITE(IOUREP,IOUERR,IOUASK
11314      371 FORMAT(' ','Comment: Current output unit numbers are',
11315         *   ' IOUREP=',I1,' IOUERR=',I1,' IOUASK=',I1)
11316          GOTO 99
11317       72 WRITE(IOUERR,372) IVALUE,IOBMSG
11318      372 FORMAT('+',10X,I4,5A4,'I/M vehicle type (1 to 4)')
11319          GOTO 98
11320       73 WRITE(IOUERR,373) IVALUE,IOBMSG
11321      373 FORMAT('+',10X,I4,5A4,'short test type flag (1 to 3)')
11322          GOTO 98
11323       74 WRITE(IOUERR,374) IVALUE,IOBMSG
11324      374 FORMAT('+',10X,I4,5A4,'new I/M data flag (1 to 4)')
11325          GOTO 98
11326       75 WRITE(IOUERR,375) IVALUE,IOBMSG
11327      375 FORMAT('+',10X,I4,5A4,'anti-tampering program start year')
11328          GOTO 98
11329       76 WRITE(IOUERR,376) IVALUE,IOBMSG
11330      376 FORMAT('+',10X,I4,5A4,'anti-tampering program 1st model year')
11331          GOTO 98
11332       77 WRITE(IOUERR,377) IVALUE,IOBMSG
11333      377 FORMAT('+',10X,I4,5A4,'anti-tampering program last model year')
11334          GOTO 98
11335       78 WRITE(IOUERR,378) IVALUE,IOBMSG
11336      378 FORMAT('+',10X,I4,5A4,'anti-tampering vehicle type (1 to 2)')
11337          GOTO 98
11338       79 WRITE(IOUERR,379) RVALUE,IOBMSG
11339      379 FORMAT('+',10X,G10.3,5A4,'evap ATP effectiveness rate (0. to 1.)')
11340          GOTO 98
11341       80 WRITE(IOUERR,380) RVALUE,IOBMSG
11342      380 FORMAT('+',10X,G10.3,5A4,'exh ATP effectiveness rate (0. to 1.)')
11343          GOTO 98
11344       81 WRITE(IOUERR,381) RVALUE,IOBMSG
11345      381 FORMAT('+',10X,G10.3,5A4,'AER matrix file column sum (0. to 1.)')
11346          GOTO 98
11347       82 WRITE(IOUERR,382) IVALUE,IOBMSG
```

```
  382 FORMAT('+',10X,I4,5A4,'19 + vehicles cutpoints flag (1 to 3)')
      GOTO 98
   83 WRITE(IOUERR,383) RVALUE,IOBMSG
C
C  Use F, not G, format because PARSEC check of entered altitude aborts
C  scenario if altitude < -200 or > 10000 feet (see QUITER message 58).
C
  383 FORMAT('+',10X,F6.0,5A4,'altitude (region = 3 => alt. < 1500.)')
C
C  Messages 60 and 61 produce excessive output if not stopped here.
C
   98 IF(MCODE.EQ.1.OR.MCODE.EQ.2.OR.MCODE.EQ.53.OR.MCODE.EQ.60
     *                          .OR.MCODE.EQ.61) STOP
      INERR=INERR+1
C
   99 RETURN
      END
```

```
      SUBROUTINE REGMOD(ICY,INERR)
C
C  REGMOD adjusts model year mileage/registration arrays.
C
C  Called by MAIN.
C
C  Calls HDDMYM, IGSFPT and TFCALX.
C
C  Input on call:
C
C    parameter list: ICY,INERR
C    common blocks:
C    /FLAGS2/ MYMRFG
C    /GSFCOM/ GSFRAC
C    /MYRSAV/ AMAR,JULMYR
C    /REGCOM/ IREJN,ALT
C    /SYSCOM/ MAXVEH
C
C  Output on return:
C
C    parameter list: INERR
C    common blocks:
C    /MYRCAL/ XMYM,JANMYR,TFMYM
C    /REGSUM/ GSFVCT
C
C  Local array subscripts:
C
C  CUM(20)  -  CUM ( JDX )
C  DAF(8)   -  DAF ( IV )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------
C  CUM      R    cumulative mileage distribution as of January 1
C  DAF      R    unnormalized sum by IV of registrations across my's
C                (acronym is from ef derivation document)
C  FRC      R    fraction of January 1 registrations in current year JDX
C                which are in their JDX'th year of operation
C  FRN      R    fraction of January 1 registrations in current year JDX
C                which are in their JDX-1'th year of operation (1 year newer)
C  GSFIDX   R    gross sales fraction (GSF) for model year IDX, given IV & IR;
C                used to extract IV's share of pairwise registration sum
C  AMC      R    mileage accrual rate for vehicle of type IV in its JDX'th
C                year of operation
C  AMN      R    mileage accrual rate for vehicle of type IV in its JDX-1th
C                year of operation (a vehicle in JDX-1 is 1 year "newer" than
C                a JDX year old vehicle)
C  MY       I    see parameter dictionary
C  SUMLDV   R    LDV DAF's combined (both gas & diesel registrations)
C  SUMLDT   R    LDT DAF's combined (both gas & diesel registrations)
C
C  Notes:
C
C  Registration distributions modification ("REGMOD") process was initially
C  changed so that HDV's were split via gross sales fractions into their gas
C  & diesel shares, both at the model year and the aggregate (all my's) level.
C  These special HDV sales fraction calculations were subsequently removed.
```

```
C  MOBILE3 now uses the same process for HDV registrations as MOBILE2 did.
C
C  Several variables were deleted, renamed, or created:
C
C  Deleted: S & X(20) in the MYR section
C  Renamed: SUM1(8) to DAF(8), GSFVCT(8), & (SUMLDV,SUMLDT), to cover
C           the 3 related but distinct uses of SUM1;
C           Z & ZZ to FRC & FRN, S & SS to AMN & AMC and X(20) to CUM(20),
C           to clarify the January 1 mileage distributions derivation methods
C           XMYR to JANMYR, January 1 model year registrations.
C  Created: GSFIDX
C
C  The HDDV MYM is now calculated for each calendar year.  This is
C  accomplished by calling the subroutine HDDMYM.  HDDMYM is only called
C  for default purposes.  If the user inputs MYM, then they alone are used.
C
C
      INTEGER ALHFLG,ATPFLG
      REAL JULMYR,JANMYR
C
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /GSFCOM/ MAXGSF,GSFRAC(22,8,2),MYGSF(22,8,2)
      COMMON /MYRSAV/ AMAR(20,8),JULMYR(20,8),NEWCUM
      COMMON /MYRCAL/ XMYM(20,8),JANMYR(20,8),TF(20,8),TFMYM(20,8)
      COMMON /REGCOM/ IREJN,ALT
      COMMON /REGSUM/ GSFVCT(8)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
C
      DIMENSION CUM(20),DAF(8)
      REAL AMC,AMN
C
C  Temporary code to reassign region = 3 (interpolate between low and high
C  altitude data), an option allowed, but not implemented, in MOBILE3.
C
      IR=IREJN
      IF(IR.NE.3) GOTO 10
      IR=1
      IF(ALT.GE.4000.) IR=2
C
C  Compute January 1 registration distributions, JANMYR.
C
   10 DO 30 IV=1,MAXVEH
C
C  Step 1: for each model year of each vehicle type, select and apply the
C          corresponding gross sales fraction to the (gas & diesel combined)
C          July 1 registrations.
C
      DO 20 JDX=1,20
      MY=ICY-JDX+1
      IGS=IGSFPT(MY,IV,IR)
      GSFIDX=GSFRAC(IGS,IV,IR)
      JANMYR(JDX,IV)=GSFIDX*JULMYR(JDX,IV)
   20 CONTINUE
C
C  Step 2: backup ICY's registrations from 7/1 to 1/1 -
C          LDV/T => my starts 10/1 prior yr => 1/1 sales are 1/3 of 7/1 sales.
C          HDV & MC => my starts 1/1 => 1/1 sales are 0.
C
```

```
      JANMYR(1,IV)=JANMYR(1,IV)/3.
      IF(IV.EQ.4.OR.IV.GE.7) JANMYR(1,IV)=0.0
   30 CONTINUE
C
C  Step 3: normalize JANMYR.
C
      DO 50 IV=1,MAXVEH
      DAF(IV)=0.0
      DO 40 JDX=1,20
      DAF(IV)=DAF(IV)+JANMYR(JDX,IV)
   40 CONTINUE
      DO 50 JDX=1,20
      IF(DAF(IV).GT.0.) JANMYR(JDX,IV)=JANMYR(JDX,IV)/DAF(IV)
   50 CONTINUE
C
C  Given DAF (JAN 1 unnormalized total (all 20 my's combined) registrations),
C  calculate the <gas | diesel> / (gas + diesel) fractions for LDV & LDT.
C  HDV & MC are assigned unity, since there is no combined gas + diesel
C  number in VCOUNT in TFCALX to split by fuel type fraction for these
C  vehicle types.  An attempt was made to model the HDV gas vs diesel sales,
C  but the results proved unsatisfactory.
C
      SUMLDV=DAF(1)+DAF(5)
      SUMLDT=DAF(2)+DAF(6)
C
      GSFVCT(1)=DAF(1)/SUMLDV
      GSFVCT(2)=DAF(2)/SUMLDT
      GSFVCT(3)=1.
      GSFVCT(4)=1.
      GSFVCT(5)=DAF(5)/SUMLDV
      GSFVCT(6)=DAF(6)/SUMLDT
      GSFVCT(7)=1.
      GSFVCT(8)=1.
C
C  Generate the mileage accrual rates.
C
C  If MOBILE3 defaults used, determine the HDDV calendar year mileage
C  by registration weighting. Otherwise, use user input mileage.
C
      IF(MYMRFG.EQ.1.OR.MYMRFG.EQ.3) CALL HDDMYM(ICY)
C
C  Compute the annual mileage / 100,000  distributions, XMYM.
C
      DO 70 IV=1,MAXVEH
      FRC=.25
      IF(IV.EQ.4.OR.IV.EQ.7.OR.IV.EQ.8) FRC=0.0
      FRN=1.-FRC
      AMN=AMAR(1,IV)
      AMC=AMAR(2,IV)
      CUM(1)=.5*FRC*AMN
      CUM(2)=FRC*(.5*FRC*AMC+AMN)+FRN*((1.+FRC)*.5*AMN)
      AMC=AMC+AMN
C
      DO 60 JDX=3,20
      CUM(JDX)=FRC*(.5*FRC*AMAR(JDX,IV)+AMC)+FRN*(.5*(1.+FRC)
     *   *AMAR(JDX-1,IV)+AMN)
      AMN=AMC
      AMC=AMC+AMAR(JDX,IV)
```

```
   60 CONTINUE
C
C  Subroutine GETCUM produces the cumulative mileage partial sums array,
C  CUMMIL, from XMYM.
C
      XMYM(1,IV)=CUM(1)
      DO 70 JDX=2,20
      XMYM(JDX,IV)=CUM(JDX)-CUM(JDX-1)
   70 CONTINUE
C
C  Now figure the January 1 model year mileage accumulation rates, TFMYM.
C
      DO 90 IV=1,MAXVEH
      FRC=.25
      TFMYM(1,IV)=AMAR(1,IV)
      IF(IV.NE.4.AND.IV.NE.7.AND.IV.NE.8) GOTO 80
      FRC=0.0
      TFMYM(1,IV)=0.0
   80 FRN=1.-FRC
C
      DO 90 JDX=2,20
      TFMYM(JDX,IV)=AMAR(JDX-1,IV)*FRN+AMAR(JDX,IV)*FRC
   90 CONTINUE
C
C  Use JANMYR, TFMYM, and GSFVCT to generate the vmt mix and travel fractions.
C
      CALL TFCALX(INERR)
C
      RETURN
      END
```

```
      SUBROUTINE HDDMYM(ICY)
C
C  HDDMYM computes annual weighted calendar year mileage for HDDV.
C
C  Called by REGMOD.
C
C  Input on call:
C
C    parameter list: ICY
C    common blocks:
C    /HDDMAR/ LHDVM,MHDVM,HHDVM
C    /HDDREG/ LHDRG,MHDRG,HHDRG
C
C  Output on return:
C
C    common block: /MYRSAV/ AMAR,NEWCUM
C
C  Notes:
C
C  HDDMYM is a new subprogram (added for MOBILE3).
C
C
      REAL JULMYR
C
      COMMON /HDDMAR/ C2BDVM(20),LHDVM(20),MHDVM(20),HHDVM(20)
      COMMON /HDDREG/ C2BDRG(21),LHDRG(21),MHDRG(21),HHDRG(21)
      COMMON /MYRSAV/ AMAR(20,8),JULMYR(20,8),NEWCUM
C
      REAL LHDVM,MHDVM,HHDVM,LHDRG,MHDRG,HHDRG
C
C  Determine pointer KDX.  KDX=1 for 1980-, 2 for 1981,
C  3 for 1982, ..., 21 for 2000+.
C
      KDX = ICY - 1979
      IF (KDX.LT.1) KDX = 1
      IF (KDX.GT.21) KDX = 21
C
C  Compute registration weighted annual mileage distribution for HDDV.
C
      DO 10 JDX = 1, 20
      AMAR(JDX,7) = (C2BDRG(KDX)*C2BDVM(JDX) +
     *   LHDRG(KDX)*LHDVM(JDX) + MHDRG(KDX)*MHDVM(JDX) +
     *   HHDRG(KDX)*HHDVM(JDX)) / (C2BDRG(KDX) + LHDRG(KDX) +
     *   MHDRG(KDX) + HHDRG(KDX))
   10 CONTINUE
C
C  Set flag so that model year mileage is recalculated in EFCALX.
C
      NEWCUM=1
      RETURN
      END
```

```
      SUBROUTINE TFCALX(INERR)
C
C  TFCALX computes the travel factors.
C
C  Called by REGMOD.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: INERR
C    common blocks:
C    /FLAGS1/ VMFLAG
C    /MYRCAL/ JANMYR,TFMYM
C    /REGSUM/ GSFVCT
C    /SYSCOM/ MAXVEH
C
C  Output on return:
C
C    parameter list: INERR
C    common blocks:
C    /MYRCAL/ TF
C    /VMXCOM/ VMTMIX
C
C  Local array subscripts:
C
C  TFNORM(8)  -  TFNORM ( IV )
C  VCOUNT(8)  -  VCOUNT ( IV )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  -------------------------------------------------------
C  TFNORM   R    for each IV, the sum across its 20 model year window of
C                registrations times mileage accrual rate
C  TOTVMT   R    total vmt: used to normalize the default vmt mix
C  VCOUNT   R    vehicle count by IV class, scaled by / 10**5; the counts come
C                from 1981 registration data.  Note LDGV & LDDV counts are
C                the identical sum of their registrations and ditto with
C                LDGT1 & LDDT.  Hence, MOBILE3 needs GSFVCT to split the sums
C                properly.  For the other IV, GSFVCT is 1.0 and has no effect.
C
C  Notes:
C
C  VCOUNT was updated with values carried out to 3 decimal places.
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG
      REAL JANMYR
C
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /MYRCAL/ XMYM(20,8),JANMYR(20,8),TF(20,8),TFMYM(20,8)
      COMMON /REGSUM/ GSFVCT(8)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /VMXCOM/ VMTMIX(8)
C
      DIMENSION TFNORM(8),VCOUNT(8)
C
```

```
      DATA VCOUNT/105.839,18.072,11.506,4.650,105.839,18.072,1.640,5.6/
C
      DO 20 IV=1,MAXVEH
      TFNORM(IV)=0.0
C
      DO 10 JDX=1,20
      TFNORM(IV)=TFNORM(IV)+TFMYM(JDX,IV)*JANMYR(JDX,IV)
   10 CONTINUE
   20 CONTINUE
C
C  Calculate normalized VMTMIX only if using default vmt data (VMFLAG = 1).
C
      IF(VMFLAG.GT.1) GOTO 50
      TOTVMT=0.0
      DO 30 IV=1,MAXVEH
      VMTMIX(IV)=VCOUNT(IV)*GSFVCT(IV)*TFNORM(IV)
      TOTVMT=TOTVMT+VMTMIX(IV)
   30 CONTINUE
C
      DO 40 IV=1,MAXVEH
      VMTMIX(IV)=VMTMIX(IV)/TOTVMT
   40 CONTINUE
C
   50 DO 70 IV=1,MAXVEH
      IF(TFNORM(IV).LE.0.0.AND.VMTMIX(IV).GT.0.)
     *   CALL QUITER(0.,IV,48,INERR)
      IF(TFNORM(IV).LE.0.) TFNORM(IV)=1.
C
      DO 60 JDX=1,20
      IDX=21-JDX
      TF(IDX,IV)=(TFMYM(JDX,IV)*JANMYR(JDX,IV))/TFNORM(IV)
   60 CONTINUE
   70 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE EFCALX(ICY,INERR)
C
C  EFCALX computes composite emission factors.
C
C  Called by MAIN.
C
C  Calls BEF, BEFIDL, BIGCFX, CCEVRT, GETCUM, IERPTR, IEXMPT, IGSFPT, QUITER,
C        and TAMPER.
C
C  Input on call:
C
C    parameter list: ICY,INERR
C    common blocks:
C    /CUMCOM/ CUMMIL
C    /FLAGS2/ NEWFLG
C    /GSFCOM/ GSFRAC
C    /MYRCAL/ TF
C    /MYRSAV/ NEWCUM
C    /REGCOM/ IREJN,ALT
C    /SYSCOM/ MAXVEH,MAXPOL
C    /VMXCOM/ VMTMIX
C
C  Output on return:
C
C    parameter list: INERR
C    common blocks:
C    /RESULT/ EFFTP,WFTP,EFEVAP,EFIDLE,WIDLE
C
C  Local array subscripts:
C
C  SALHCF(20,3,8,2)  -  SALHCF ( IDX, IP, IV, IR )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------
C  COMPCC   R    composite evaporative & crankcase emission factor for IDX
C  COMPEF   R    composite emission factor for IDX: summed across IDX to get
C                EFFTP for the given IP & IV
C  IDLFAC   R    idle emission factor for IDX: summed across IDX to get
C                EFIDLE for the given IP & IV
C  IGER     I    model year group pointer from IERPTR; used to index basic
C                and idle emission rate arrays
C  JREJN    I    = IREJN = region code, except IREJN = 3 (interpolation)
C                & ALT < 1500 => JREJN = 1, & ALT >= 1500 => JREJN not used
C  MY       I    see parameter dictionary
C  SALHCF   R    see parameter dictionary
C  VMLDGT   R    sum of vmt for LDGT1 and LDGT2 (= X23 in MOBILE2)
C  VMTAGE   R    see parameter dictionary
C
C  Notes:
C
C  CFRET becomes SALHCF, losing operating mode and temperature correction
C  factor components to OMTCF.  IDX is now passed to CCEVRT and BEF, in order
C  to index the my dependent correction factors applied in those subs: TAMEVP,
C  OMTCF, and OMTTAM.
C
C  The methane offset model was encoded.  This caused the removal
```

```
15058     C  of all methane factors from EFCALX; namely common block BEFGCM,
15059     C  IEX, IEXMPT, EXMETH, and EXMVAL.  The methane calculations
15060     C  are now performed in BIGCFX, BEF, and BEFIDL.
15061     C
15062     C  The flag "INITFL" was changed to "NEWCUM".  This flag is
15063     C  set to 1 whenever the cumulative model year mileage needs
15064     C  to be recalculated (whenever HDDMYM is called).
15065     C
15066     C
15067           INTEGER ALHFLG,ATPFLG
15068           REAL JULMYR,JANMYR
15069     C
15070           COMMON /CUMCOM/ CUMMIL(20,8)
15071           COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
15072           COMMON /GSFCOM/ MAXGSF,GSFRAC(22,8,2),MYGSF(22,8,2)
15073           COMMON /MYRCAL/ XMYM(20,8),JANMYR(20,8),TF(20,8),TFMYM(20,8)
15074           COMMON /MYRSAV/ AMAR(20,8),JULMYR(20,8),NEWCUM
15075           COMMON /REGCOM/ IREJN,ALT
15076           COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
15077           COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
15078           COMMON /VMXCOM/ VMTMIX(8)
15079     C
15080           REAL IDLFAC
15081           DIMENSION SALHCF(20,3,8,2)
15082     C
15083           IF(NEWCUM.NE.0) CALL GETCUM
15084           NEWCUM=0
15085     C
15086     C  Setup for composite light duty gas truck.
15087     C
15088           VMLDGT=VMTMIX(2)+VMTMIX(3)
15089           IF(VMLDGT.EQ.0.) VMLDGT=1.
15090     C
15091     C  Calculate this scenario's tampering effects.
15092     C
15093           CALL TAMPER(ICY)
15094     C
15095           IR=IREJN
15096           IF(IR.NE.3) GOTO 10
15097           IR=1
15098           IF(ALT.GE.4000.) IR=2
15099     C
15100     C  Determine whether the region needs speed, temperature, altitude, etc.
15101     C  correction factors for one or two regions.  Two regions are needed
15102     C  whenever the program performs an interpolation between two regions.
15103     C
15104        10 IF(IREJN.EQ.3.AND.ALT.GE.1500.) GOTO 15
15105           JREJN=IREJN
15106           IF(IREJN.EQ.3.AND.ALT.LT.1500.) JREJN=1
15107           CALL BIGCFX(ICY,JREJN,SALHCF(1,1,1,1))
15108           GOTO 20
15109     C
15110     C  Region is 3 (interpolation between high and low altitude).
15111     C
15112        15 CALL BIGCFX(ICY,1,SALHCF(1,1,1,1))
15113           CALL BIGCFX(ICY,2,SALHCF(1,1,1,2))
15114     C
15115        20 DO 90 IP=1,MAXPOL
```

```
      WFTP(IP)=0.0
      WIDLE(IP)=0.0
      EFFTP(IP,9)=0.0
      EFIDLE(IP,9)=0.0
      IF(IP.EQ.1) EFEVAP(9)=0.0
C
      DO 80 IV=1,MAXVEH
      EFFTP(IP,IV)=0.0
      EFIDLE(IP,IV)=0.0
      IF(IP.EQ.1) EFEVAP(IV)=0.0
      IF(VMTMIX(IV).EQ.0.) GOTO 80
C
      DO 50 IDX=1,20
C
      IF(TF(IDX,IV).LE.0.) GOTO 50
C
C  Initialize emissions to zero.
C
      COMPCC=0.0
      COMPEF=0.0
      IDLFAC=0.0
C
      JDX=21-IDX
      VMTAGE=CUMMIL(JDX,IV)/10000.
      MY=ICY+IDX-20
C
C  These up to 20 calls to IGSFPT (only the last is used, after exiting the
C  IDX loop) only make sense if it is possible for TF(20,IV) = 0.0 => either
C  treat as here, or have JDX loop after 370 search for last nonzero TF and
C  call IGSFPT once at that point.
C
      IGS=IGSFPT(MY,IV,IR)
C
C  Determine whether the composite emission requires an interpolation
C  between two regions.
C
      IF(IREJN.EQ.3.AND.ALT.GE.1500.) GOTO 30
C
C  The composite emission calculation does not require an
C  interpolation between two regions.
C
      IF(IP.EQ.1) COMPCC=CCEVRT(MY,IDX,IV,JREJN)*TF(IDX,IV)
      IGER=IERPTR(MY,IP,IV,JREJN)
      COMPEF=(BEF(MY,IDX,ICY,IGER,IP,IV,JREJN,VMTAGE)
     *       *SALHCF(IDX,IP,IV,1))*TF(IDX,IV)+COMPCC
C
C  Compute idle emissions.
C
      IDLFAC=BEFIDL(IGER,IP,IV,JREJN,VMTAGE)*TF(IDX,IV)
      GOTO 40
C
C  Once the evaluated altitude methodology is finalized, the procedure
C  will be put here.  Note that for entered altitudes < 1500. FT. that no
C  interpolation is planned (for now): the run is treated as a low altitude
C  region run and execution is continued accordingly.  For altitudes >= 1500.
C  ft., however, an error message is written out and execution is aborted for
C  that scenario.
C
```

```
   30 CALL QUITER(ALT,0,83,INERR)
      GOTO 99
C
   40 EFFTP(IP,IV)=EFFTP(IP,IV)+COMPEF
      EFIDLE(IP,IV)=EFIDLE(IP,IV)+IDLFAC
      IF(IP.EQ.1) EFEVAP(IV)=EFEVAP(IV)+COMPCC
   50 CONTINUE
C
C  Sales fractions exceed 0.0 for all non-California heavy duty vehicle groups
C
      IF(IV.EQ.4.OR.IV.EQ.7) GOTO 60
      IF(EFFTP(IP,IV).GT.0.0.AND.GSFRAC(IGS,IV,IR).EQ.0.)
     *   CALL QUITER(0.,IV,67,INERR)
   60 IF(EFFTP(IP,IV).LE.0.) CALL QUITER(0.,IV,68,INERR)
C
C  NEWFLG test added but could be better.
C  E.g., check 20 yr span for use/non-use of NEWFLG and err-out only
C  on non-use of alternate equations, etc.
C
      IF(IV.EQ.4.OR.IV.EQ.7) GOTO 70
      IF(NEWFLG.EQ.1.AND.EFIDLE(IP,IV).GT.0.
     *   .AND.GSFRAC(IGS,IV,IR).EQ.0.)
     *      CALL QUITER(0.,IV,69,INERR)
   70 IF(NEWFLG.EQ.1.AND.EFIDLE(IP,IV).LE.0.)
     *   CALL QUITER(0.,IV,70,INERR)
C
      WFTP(IP)=WFTP(IP)+(EFFTP(IP,IV)*VMTMIX(IV))
      WIDLE(IP)=WIDLE(IP)+(EFIDLE(IP,IV)*VMTMIX(IV))
   80 CONTINUE
C
C  Assign composite light duty gas truck emission factor.
C
      IF(EFFTP(IP,2).GT.0.0.AND.EFFTP(IP,3).GT.0.) EFFTP(IP,9)=
     *   (EFFTP(IP,2)*VMTMIX(2)+EFFTP(IP,3)*VMTMIX(3))/VMLDGT
      IF(EFIDLE(IP,2).GT.0.0.AND.EFIDLE(IP,3).GT.0.) EFIDLE(IP,9)=
     *   (EFIDLE(IP,2)*VMTMIX(2)+EFIDLE(IP,3)*VMTMIX(3))/VMLDGT
      IF(IP.EQ.1.AND.EFEVAP(2).GT.0.0.AND.EFEVAP(3).GT.0.)
     *   EFEVAP(9)=(EFEVAP(2)*VMTMIX(2)+EFEVAP(3)*VMTMIX(3))/VMLDGT
   90 CONTINUE
C
   99 RETURN
      END
```

```
      SUBROUTINE GETCUM
C
C GETCUM computes average January 1 fleet cumulative mileages.
C
C Called by EFCALX.
C
C Input on call:
C
C   common blocks:
C   /MYRCAL/ XMYM
C   /SYSCOM/ MAXVEH
C
C Output on return:
C
C   common block: /CUMCOM/ CUMMIL
C
C
      REAL JANMYR
C
      COMMON /CUMCOM/ CUMMIL(20,8)
      COMMON /MYRCAL/ XMYM(20,8),JANMYR(20,8),TF(20,8),TFMYM(20,8)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
C
      DO 10 IV=1,MAXVEH
      CUMMIL(1,IV)=XMYM(1,IV)*100000.
C
      DO 10 JDX=2,20
      CUMMIL(JDX,IV)=XMYM(JDX,IV)*100000.+CUMMIL(JDX-1,IV)
   10 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE TAMPER(ICY)
C
C  TAMPER computes tampering effects in grams/mile on bag 1, 2 & 3 HC, CO,
C  & NOX and on hotsoak, diurnal & crankcase HC.
C
C  Called by EFCALX.
C
C  Calls BAGEME, DISRAT, EFFGRP, EMIRAT and EVPEME.
C
C  Input on call:
C
C    parameter list: ICY
C    common blocks:
C    /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG
C    /FLAGS2/ IMFLAG
C    /IMPAR1/ ICYIM,MODYR1,MODYR2
C    /IMPAR2/ ILDT
C
C  Output on return:
C
C    common blocks:
C    /LOOKUP/ IVTAM
C    /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IMDXSY,KINK
C
C  Local array subscripts:
C
C  IMIV(4,2)  -  IMIV ( ILDT, IVTAM-1 )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  IMIV     I    table showing whether or not LDGT1 and/or LDGT2
C                are covered by the selected I/M program
C  IMDX1    I    IDX order pointer to first model year covered by I/M program
C  IMDX2    I    IDX order pointer to last model year covered by I/M program
C  IMCASE   I    flag relating run's I/M program to scenario's calendar year
C                  1 = no I/M for ICY
C                  2 = I/M for at least a subset of ICY's IVTAM and IDX
C  IMVEH    I    flag relating run's I/M program to tampering vehicle class
C                  1 = no I/M for this IVTAM
C                  2 = I/M for at least a subset of IVTAM's IDX (19 year
C                      window)
C  IM       I    flag relating run's I/M program to model year pointed to by
C                IDX:
C                  1 = no I/M for this IDX
C                  2 = I/M for this IDX, given ICY, IVTAM & I/M parameters
C                      IM is passed as a parameter to DISRAT.
C  LDX1ST   I    JDX order pointer to first model year covered by ATP
C  LDXLST   I    JDX order pointer to last model year covered by ATP
C  LMYR     I    flag relating model year to ATP parameters
C                  1 = model year not covered by an ATP
C                  2 = JDX is covered by an ATP (but IVTAM may not be,
C                      hence, check for inclusion to set LMYRVT)
C
C  Notes:
C
C  TAMPER is a new subprogram (added for MOBILE3).
```

```
C
C
      INTEGER ALHFLG,ATPFLG
C
      DIMENSION IMIV(4,2)
C
      COMMON /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG(4),NLAT,ATNAME(20,9)
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
      COMMON /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME(20,9)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
C
      DATA IMIV/1,2,1,2,1,1,2,2/
C
C  Relate start year of anti-tampering program (ATP) and 1st and last model
C  years covered to calendar year.  Put them in JDX order.  For example:
C
C       ICY = LAPSY => LDXSY = 1
C       ICY = LAPSY + 1 => LDXSY = 2
C           .
C           .
C       ICY = LAPSY + 19 => LDXSY = 20
C
C  JDX order is used because these values are used to access the JDX ordered
C  CUMMIL.  Note that LDXSY <= 0 => ICY < LAPSY => no ATP was in effect during
C  any part of the calendar year's 20 model year window.
C
C  The ATP has to be in effect at least 1 year prior to ICY for it to affect
C  ICY's emissions.  The mileage accumulated through LAPSY all goes to the no
C  program case.
C
C  Only calculate these values once per scenario => compute them here before
C  the tamper loops begin.
C
      LDXSY=ICY-LAPSY+1
      LDX1ST=ICY-LAP1ST+1
      LDXLST=ICY-LAPLST+1
C
C  Decide whether to use "No I/M" (IM=1) or "I/M" (IM=2) ZMLTAM and DRTAM:
C
C  First relate start and end model years of I/M program to calendar year.
C  IMDX1 & IMDX2 are in IDX order (2 = my 19 to 20 = my 1 = ICY).
C
      IMDX1=MODYR1-ICY+20
      IMDX2=MODYR2-ICY+20
C
C  Now assume I/M program rates do apply, unless any of the non-I/M program
C  year conditions are met.
C
      IMCASE=2
      IF(IMFLAG.EQ.1.OR.ICY.LE.ICYIM.OR.ICY.LE.MODYR1) IMCASE=1
C
C  Relate I/M start year to calendar year, using JDX ordering.  This pointer
C  will be used within IDX loop to set kinked tampering rate curves flag.
C
      IMDXSY=ICY-ICYIM+1
C
```

```
C  For each tampering vehicle type and each model year in the 19 year window
C  from ICY-18 thru ICY (20+ year case is always zeroed), compute the bag and
C  evaporative tampering offsets.
C
      DO 40 IVTAM=1,4
C
C  If IM program in effect before calendar year, check if vehicle type IVTAM
C  is covered:
C
      IF(IMCASE.EQ.1) IMVEH=1
      IF(IMCASE.EQ.2.AND.IVTAM.EQ.1) IMVEH=2
      IF(IMCASE.EQ.2.AND.(IVTAM.EQ.2.OR.IVTAM.EQ.3))
     1  IMVEH=IMIV(ILDT,IVTAM-1)
      IF(IVTAM.EQ.4) IMVEH=1
C
      DO 30 IDX=2,20
C
C  MY pointer info using IDX & ICY may be done here, before sub calls.
C
C  Identify this loop's model year for use in IGDPTR lookups.
C
      MY=ICY-(20-IDX)
C
C  Assign the reverse order (ICY -> 1, increases with age) my index for use in
C  apportioning mileage weights.
C
      JDX=21-IDX
C
C  Reset (turn off) the ATP my range switch.  Turn on if there is an ATP
C  program, it starts before the calendar year, the model year JDX is in the
C  affected range and the vehicle type has been selected by the user for
C  coverage.
C
C       LMYRVT = 1 => switch is off.  ATP not a factor in my JDX's tampering
C       LMYRVT = 2 => switch is ON.  ATP is a factor in my JDX's tampering
C
C  Note: ATPFLG = 1 => LAPSY = 2020 => LDXSY < 1 => 1st 2 criteria can be
C         checked using LDXSY.
C
      LMYR=1
      LMYRVT=1
      IF(LDXSY.GT.1.AND.LDX1ST.GE.JDX.AND.JDX.GE.LDXLST)  LMYR=2
      IF(LMYR.EQ.2.AND.LVTFLG(IVTAM).EQ.2) LMYRVT=2
C
C  Check if model year IDX is included in the I/M program:
C
      IM=2
      IF(IMVEH.EQ.1) IM=1
      IF(IDX.LT.IMDX1.OR.IDX.GT.IMDX2) IM=1
C
C  Set kinked disablement rate curves flag.
C
      KINK=1
      IF(IM.EQ.2.AND.JDX.GT.IMDXSY) KINK=2
C
C  Figure the base tampering rates for both exhaust and non-exhaust emissions.
C
      CALL DISRAT(IM)
```

```
C
C  The next 3 subroutines compute the tampering bag emission additives.
C
      CALL EFFGRP
      CALL EMIRAT
      CALL BAGEME
C
C  The non-exhaust HC emission additives calculation procedure is much
C  simpler because there are no overlaps.  EVPEME does all the work.
C
      CALL EVPEME
C
   30 CONTINUE
   40 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE DISRAT(IM)
C
C  DISRAT computes the disablement rates for the given vehicle type, model
C  year and mileage distribution.  If the start year of an anti-tampering
C  program precedes the calendar year, then 2 sets of rates are produced.
C  The first set covers the period up through the start year and the second
C  set the period since then.
C
C  Called by TAMPER.
C
C  Calls AMIN1 and AMAX1, standard FORTRAN library functions that select the
C  minimum and maximum, respectively, of type REAL arguments.
C
C  Input on call:
C
C    parameter list: IM
C    common blocks:
C    /BASETR/ ZMLTAM,DRTAM
C    /CUMCOM/ CUMMIL
C    /LOOKUP/ IVTAM
C    /MYCODE/ JDX,LDXSY,LMYRVT,IMDXSY,KINK
C
C  Output on return:
C
C    common blocks:
C    /BASETR/ BTR
C    /MYCODE/ IAY
C
C  Local array subscripts:
C
C  CUMST(2)  -  CUMST ( IAY )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  CUMST    R    mileage accumulated segments for straight line subcases
C                (no kink from I/M startup):
C                  1 = MY through ICY (1.1/2) or ICY (2.1/2)
C                  2 = LAPSY (2.1/2) or MY (3.1/2) through ICY
C
C  Kinked rate lines mileage accumulated segments:
C
C  CUMNAY   R    from MY through ICYIM (when ICYIM precedes LAPSY)
C  CUMIAY   R    after ICYIM through LAPSY
C  CUMNIM   R    from MY through ICYIM (when ICYIM follows LAPSY)
C  CUMIM    R    after ICYIM through ICY
C  CUMJDX   R    from MY through ICY
C
C  Kinked rate lines tampering rates, given mileage:
C
C  TRNIM    R    non-I/M segment times non-I/M slope + non-I/M base
C  TRNIMI   R    non-I/M segment times I/M slope + I/M base
C  TRCYST   R    lower of non-I/M & I/M straight line rates at calendar year
C  TRCY     R    rate at calendar year to be used
C  CYRNIM   R    MY to ICY mileage, all times non-I/M deterioration rate
C  CYRIM    R    MY to ICY mileage, all times I/M deterioration rate
C
```

```
C  TRAYST   R    MY through LAPSY, when I/M kink is in this segment,
C                evaluated at minimum of non-I/M & I/M rates at LAPSY
C  TRAY     R    MY through LAPSY, when I/M kink is in this segment
C  AYRNIM   R    MY through LAPSY, all times non-I/M DRTAM
C  AYRIM    R    MY through LAPSY, all times I/M DRTAM
C
C Notes:
C
C  DISRAT is a new subprogram (added for MOBILE3).
C
C
      DIMENSION CUMST(2)
C
      COMMON /BASETR/ BTR(7,2),ZMLTAM(7,2,4),DRTAM(7,2,4)
      COMMON /CUMCOM/ CUMMIL(20,8)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
C
C  Calculate mileage accumulated up through start year of anti-tampering
C  program (ATP) and mileage since.  Then compute the base tampering rates.
C  There are 3 cases:
C
C  (1) There is no ATP or the ATP is not in effect until the calendar year
C      or later or the model year (JDX) being checked on this call is not in
C      the range included in the ATP or the VT is not covered by the ATP:
C      Check if ATP-applies switch is on.  Off => all mileage is "previous"
C      (to any ATP) => IAY = 1 for all tampering.
C
      IF(LMYRVT.EQ.2) GOTO 26
      IF(KINK.EQ.2) GOTO 14
C
C  (1.1) Straight (all mileage on non-I/M) rate lines and
C  (1.2) Straight (all mileage on I/M) rate lines subcases.
C
      CUMST(1)=CUMMIL(JDX,IVTAM)*.0001
      CUMST(2)=0.0
      DO 10 ID=1,7
      BTR(ID,1)=ZMLTAM(ID,IM,IVTAM)+DRTAM(ID,IM,IVTAM)*CUMST(1)
      BTR(ID,2)=0.0
   10 CONTINUE
      GOTO 80
C
C  (1.3) Kinked (non-I/M ZMLTAM, first mileage segment at non-I/M rate and
C        second at I/M rate) lines subcase.
C
   14 CUMJDX=CUMMIL(JDX,IVTAM)*.0001
      CUMNIM=CUMMIL(JDX-IMDXSY+1,IVTAM)*.0001
      CUMIM=CUMJDX-CUMNIM
C
      DO 22 ID=1,7
      TRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMNIM
      TRCY=TRNIM+DRTAM(ID,2,IVTAM)*CUMIM
      IF(ZMLTAM(ID,2,IVTAM).LE.ZMLTAM(ID,1,IVTAM).AND.TRNIM.GT.0)GOTO 18
C
      CYRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMJDX
      CYRIM=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMJDX
      TRCYST=AMIN1(CYRNIM,CYRIM)
      TRCY=AMAX1(TRCY,TRCYST)
```

```
      TRNIMI=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMNIM
      IF(TRNIM.LT.0.0.AND.TRNIM.GT.TRNIMI) TRCY=CYRIM
C
   18 BTR(ID,1)=TRCY
      BTR(ID,2)=0.0
   22 CONTINUE
      GOTO 80
C
C  (2) There is an ATP and it starts before ICY but at or after my JDX and
C      JDX is in the ATP affected MY range.  This case => split mileage into
C      "previous" and overall (= total = "previous" + "subsequent") parts.
C      "Subsequent" category sizes will be computed in subroutine EFFGRP as
C      the difference between the corrected overall and "previous" sizes.
C
   26 IF(LDXSY.GT.JDX) GOTO 58
      IF(KINK.EQ.2) GOTO 34
C
C  (2.1) Straight non-I/M rate lines and
C  (2.2) Straight I/M rate lines subcases.
C
      CUMST(1)=CUMMIL(JDX-LDXSY+1,IVTAM)*.0001
      CUMST(2)=CUMMIL(JDX,IVTAM)*.0001
      DO 30 ID=1,7
      BTR(ID,1)=ZMLTAM(ID,IM,IVTAM)+DRTAM(ID,IM,IVTAM)*CUMST(1)
      BTR(ID,2)=ZMLTAM(ID,IM,IVTAM)+DRTAM(ID,IM,IVTAM)*CUMST(2)
   30 CONTINUE
      GOTO 80
C
C  (2.3) Kinked rate lines subcase.
C
   34 IF(IMDXSY.GT.LDXSY) GOTO 46
C
C  (2.3.1) Previous (to ATP start year) mileage all on non-I/M rate line.
C
      CUMNAY=CUMMIL(JDX-LDXSY+1,IVTAM)*.0001
      CUMJDX=CUMMIL(JDX,IVTAM)*.0001
      CUMNIM=CUMMIL(JDX-IMDXSY+1,IVTAM)*.0001
      CUMIM=CUMJDX-CUMNIM
C
      DO 42 ID=1,7
      TRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMNIM
      TRCY=TRNIM+DRTAM(ID,2,IVTAM)*CUMIM
      IF(ZMLTAM(ID,2,IVTAM).LE.ZMLTAM(ID,1,IVTAM).AND.TRNIM.GT.0)GOTO 38
C
      CYRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMJDX
      CYRIM=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMJDX
      TRCYST=AMIN1(CYRNIM,CYRIM)
      TRCY=AMAX1(TRCY,TRCYST)
      TRNIMI=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMNIM
      IF(TRNIM.LT.0.0.AND.TRNIM.GT.TRNIMI) TRCY=CYRIM
C
   38 BTR(ID,1)=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMNAY
      BTR(ID,2)=TRCY
   42 CONTINUE
      GOTO 80
C
C  (2.3.2) Kink is in the "previous" segment.
C
```

```
18174        46 CUMJDX=CUMMIL(JDX,IVTAM)*.0001
18175           CUMNIM=CUMMIL(JDX-IMDXSY+1,IVTAM)*.0001
18176           CUMIAY=CUMMIL(JDX-LDXSY+1,IVTAM)*.0001-CUMNIM
18177           CUMIM=CUMJDX-CUMNIM
18178     C
18179           DO 54 ID=1,7
18180           TRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMNIM
18181           TRAY=TRNIM+DRTAM(ID,2,IVTAM)*CUMIAY
18182           TRCY=TRNIM+DRTAM(ID,2,IVTAM)*CUMIM
18183           IF(ZMLTAM(ID,2,IVTAM).LE.ZMLTAM(ID,1,IVTAM).AND.TRNIM.GT.0)GOTO 50
18184     C
18185           AYRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*(CUMNIM+CUMIAY)
18186           AYRIM=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*(CUMNIM+CUMIAY)
18187           TRAYST=AMIN1(AYRNIM,AYRIM)
18188           TRAY=AMAX1(TRAY,TRAYST)
18189           TRNIMI=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMNIM
18190           IF(TRNIM.LT.0.0.AND.TRNIM.GT.TRNIMI) TRAY=AYRIM
18191     C
18192           CYRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMJDX
18193           CYRIM=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMJDX
18194           TRCYST=AMIN1(CYRNIM,CYRIM)
18195           TRCY=AMAX1(TRCY,TRCYST)
18196           IF(TRNIM.LT.0.0.AND.TRNIM.GT.TRNIMI) TRCY=CYRIM
18197     C
18198        50 BTR(ID,1)=TRAY
18199           BTR(ID,2)=TRCY
18200        54 CONTINUE
18201           GOTO 80
18202     C
18203     C  (3) There is an ATP and it starts before the model year and JDX is in the
18204     C      ATP affected MY range.  All mileage is "subsequent" (to LAPSY) =>
18205     C      IAY = 2 for all tampering.
18206     C
18207        58 IF(KINK.EQ.2) GOTO 66
18208     C
18209     C  (3.1) Straight non-I/M rate lines and
18210     C  (3.2) Straight I/M rate lines subcases.
18211     C
18212           CUMST(1)=0.0
18213           CUMST(2)=CUMMIL(JDX,IVTAM)*.0001
18214           DO 62 ID=1,7
18215           BTR(ID,1)=0.0
18216           BTR(ID,2)=ZMLTAM(ID,IM,IVTAM)+DRTAM(ID,IM,IVTAM)*CUMST(2)
18217        62 CONTINUE
18218           GOTO 80
18219     C
18220     C  (3.3) Kinked rate lines subcase.
18221     C
18222        66 CUMJDX=CUMMIL(JDX,IVTAM)*.0001
18223           CUMNIM=CUMMIL(JDX-IMDXSY+1,IVTAM)*.0001
18224           CUMIM=CUMJDX-CUMNIM
18225     C
18226           DO 74 ID=1,7
18227           TRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMNIM
18228           TRCY=TRNIM+DRTAM(ID,2,IVTAM)*CUMIM
18229           IF(ZMLTAM(ID,2,IVTAM).LE.ZMLTAM(ID,1,IVTAM).AND.TRNIM.GT.0)GOTO 70
18230     C
18231           CYRNIM=ZMLTAM(ID,1,IVTAM)+DRTAM(ID,1,IVTAM)*CUMJDX
```

```
      CYRIM=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMJDX
      TRCYST=AMIN1(CYRNIM,CYRIM)
      TRCY=AMAX1(TRCY,TRCYST)
      TRNIMI=ZMLTAM(ID,2,IVTAM)+DRTAM(ID,2,IVTAM)*CUMNIM
      IF(TRNIM.LT.0.0.AND.TRNIM.GT.TRNIMI) TRCY=CYRIM
C
   70 BTR(ID,1)=0.0
      BTR(ID,2)=TRCY
   74 CONTINUE
C
C  Range checks:
C
C  (1) Cannot tamper with < 0% or > 100% of the fleet.
C
   80 DO 88 ID=1,7
      DO 84  IAY=1,2
      IF(BTR(ID,IAY).LT.0.0) BTR(ID,IAY)=0.0
      IF(BTR(ID,IAY).GT.1.0) BTR(ID,IAY)=1.0
   84 CONTINUE
   88 CONTINUE
C
C  (2) Cannot misfuel > 100% of fleet => partial sums of the 2 types of
C      misfueling must be <= 100% (check order specified by EPA):
C      Fix BTR(3,1) < BTR(4,1) < BTR(3,2) < BTR(4,2).  BTR(3,1) has already
C      been checked (and fixed, if necessary) in range check (1).
C
      IF((BTR(4,1)+BTR(3,1)).GT.1.0) BTR(4,1)=1.0-BTR(3,1)
      IF((BTR(3,2)+BTR(4,1)).GT.1.0) BTR(3,2)=1.0-BTR(4,1)
      IF((BTR(4,2)+BTR(3,2)).GT.1.0) BTR(4,2)=1.0-BTR(3,2)
C
      RETURN
      END
```

```
      SUBROUTINE EFFGRP
C
C  EFFGRP builds the tampering effects group sizes array.  The tampering
C  rates from DISRAT are modified  to account for technology vs tampering
C  types, overlap factors, anti-tampering program effectiveness factors and
C  technology group sizes.  The output rates are divided into effects groups
C  corresponding to the significant emission impact tampering groups.
C
C  Called by TAMPER.
C
C  Calls ADJ12, ATPEFF, A8T011, C1T07, C8T012, IGDPTR, SETEGS and TECHO.
C
C  Input on call:
C
C    common blocks:
C    /EGSCAL/ TGS
C    /LOOKUP/ IVTAM
C    /MYCODE/ JDX,LDXSY,LMYRVT
C    /SIZCAL/ CSIZE
C
C  Output on return:
C
C    common blocks:
C    /EGSCAL/ EGS
C    /LOOKUP/ IQG,IPG,JPGD
C    /MYCODE/ IAY
C    /SIZCAL/ TGSUSE,CSAE
C
C  Local array subscripts:
C
C  CSF1ST(7,2)  -  CSF1ST ( IC7, IPG )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  CSF1ST   R    category size factor for 1st calculation of CSIZE
C
C  Notes:
C
C  EFFGRP is a new subprogram (added for MOBILE3).
C
C
      DIMENSION CSF1ST(7,2)
C
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
C
      DATA CSF1ST/.066,.111,.105,.238,.032,.441,.050,
     2            .027,.063,.055,.307,.013,.372,.070/
C
C  Zero out tampering effects group sizes (EGS) array.
C
      DO 20 IPG=1,2
      DO 10 IEG=1,7
      EGS(IEG,IPG)=0.0
```

```
19058        10 CONTINUE
19059        20 CONTINUE
19060     C
19061     C  Add in each equipment (technology) group's before and after anti-tampering
19062     C  program (ATP) start year contribution to each EGS category for each
19063     C  pollutant group.
19064     C
19065           DO 80 IPG=1,2
19066     C
19067     C  Set ATR pointer for 1st 3 sizes: HC/CO => use AIRS, NOX => use EGRS.
19068     C
19069           IF(IPG.EQ.1) JPGD=1
19070           IF(IPG.EQ.2) JPGD=5
19071     C
19072           DO 70 IQG=1,6
19073     C
19074     C  Lookup technology group size to be used on this pass.
19075     C
19076           IG1=IGDPTR(1)
19077           TGSUSE=TGS(IG1,IQG,IVTAM)
19078     C
19079     C  Check how technology type & size affect tampering rates.
19080     C
19081           CALL TECHO(&70)
19082     C
19083     C  HC & CO effects category sizes are identical => only 2 pollutant passes.
19084     C
19085           DO 65 IAY=1,2
19086     C
19087     C  Skip to end of loop if no mileage accumulated (hence no tampering)
19088     C  for the pre/post ATP year case being checked.
19089     C
19090           IF(IAY.EQ.1.AND.LMYRVT.EQ.2.AND.LDXSY.GT.JDX) GOTO 65
19091           IF(IAY.EQ.2.AND.LMYRVT.EQ.1) GOTO 65
19092     C
19093           CALL C1TO7(CSF1ST(1,IPG))
19094           CALL C8TO12
19095     C
19096     C  The first calculation pass can produce negative sizes for the no
19097     C  overlap (8-11) and the no effects (12) categories.  Correct these
19098     C  by calling A8TO11 and ADJ12, respectively.
19099     C
19100           DO 30 IC=8,11
19101           IF(CSIZE(IC,IAY).LT.0) CALL A8TO11(IC)
19102        30 CONTINUE
19103           IF(CSIZE(12,IAY).LT.0) CALL ADJ12(CSF1ST)
19104     C
19105     C  "Subsequent" (to ATP start year) pass + have split mileage case =>
19106     C  "subsequent" category size = overall size - "previous" size
19107     C
19108     C  I.e., in the split mileage case, the program computes the previous to
19109     C  ATP start year and overall values up to this point.  After this next
19110     C  loop assigns the subsequent values as residuals, the program works
19111     C  directly with the previous and subsequent cases in the calls to ATPEFF
19112     C  and SETEGS.
19113     C
19114           IF(IAY.EQ.1.OR.LMYRVT.EQ.1.OR.LDXSY.GT.JDX) GOTO 50
19115           DO 40 IC=1,12
```

```
19116          CSIZE(IC,2)=CSIZE(IC,2)-CSIZE(IC,1)
19117       40 CONTINUE
19118    C
19119    C  Check if ATP covers this MY.  Yes => apply effectiveness factors to the
19120    C  category sizes.
19121    C
19122       50 IF(LMYRVT.EQ.2) CALL ATPEFF(&60)
19123    C
19124    C  Otherwise just shift IAY's sizes to CSAE without modification.
19125    C
19126          DO 55 IC=1,12
19127          CSAE(IC)=CSIZE(IC,IAY)
19128       55 CONTINUE
19129    C
19130    C  Set the effects group sizes.
19131    C
19132       60 CALL SETEGS
19133    C
19134       65 CONTINUE
19135       70 CONTINUE
19136       80 CONTINUE
19137    C
19138          RETURN
19139          END
```

```
      SUBROUTINE EMIRAT
C
C  EMIRAT computes / assigns emission impact rates for the tampering effects
C  groups.
C
C  Called by TAMPER.
C
C  Calls IGDPTR.
C
C  Input on call:
C
C    common blocks:
C    /EGSCAL/ TGS
C    /EMECAL/ EM3W,EMOX,EMEGR
C    /LOOKUP/ IVTAM
C
C  Output on return:
C
C    common blocks:
C    /EMECAL/ EMI
C    /LOOKUP/ IQG
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------
C  POX      R    percentage of vehicles equipped with oxidation catalysts
C  POXN     R    POX normalized to ox cat equipped / all cat equipped
C  P3W      R    percentage of vehicles equipped with 3-way catalysts
C  P3WN     R    P3W normalized to 3-way cat equipped / all cat equipped
C  TK       R    percentage of fleet equipped with catalysts
C
C  Notes:
C
C  EMIRAT is a new subprogram (added for MOBILE3).
C
C
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /EMECAL/ EM3W(3,3,3),EMOX(3,3,3),EMEGR(4,3,3),EMI(7,3,3)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
C
C  Compute the percentage of vehicles equipped with 3-way and oxidation
C  catalysts.
C
      P3W=0.0
      DO 10 IQG=5,6
      IG1=IGDPTR(1)
      P3W=P3W+TGS(IG1,IQG,IVTAM)
   10 CONTINUE
C
      POX=0.0
      DO 20 IQG=2,3
      IG1=IGDPTR(1)
      POX=POX+TGS(IG1,IQG,IVTAM)
   20 CONTINUE
      POX=POX-P3W
C
C  Normalize the percentages in order to use them as weights.
```

```
C
      TK=P3W+POX
C
C  Avoid divide by zero runtime error.
C
      IF(TK.EQ.0.0) TK=1.0
      P3WN=P3W/TK
      POXN=POX/TK
C
C  Compute / assign emissions impact for each bag for each pollutant.
C
      DO 50 IP=1,3
      DO 40 IB=1,3
C
C  Air pump disablement (air pump only equipped) emission impact is the
C  oxidation catalyst emission for the given bag and pollutant.  These
C  numbers are constant with respect to model year and vehicle type and
C  therefore are hardcoded in BLOCK DATA into EMI(1,IB,IP).  Note that
C  EMI(1,IB,IP) = EMOX(1,IB,IP) for all IB,IP.  If EMI for air pump
C  disablement becomes variable in MOBILE4+, the code will be inserted here.
C
C  Next 3 effects groups use the catalyst type weighted emissions.
C
      DO 30 IEG=2,4
      IEK=IEG-1
      EMI(IEG,IB,IP)=P3WN*EM3W(IEK,IB,IP)+POXN*EMOX(IEK,IB,IP)
   30 CONTINUE
C
C  Get EGR only MY/IVI pointer and look up corresponding emission impact.
C
      IG2=IGDPTR(2)
      EMI(5,IB,IP)=EMEGR(IG2,IB,IP)
C
C  EGR disabled / catalyst removed and EGR disabled / misfueled emissions are
C  a constant function of bag and pollutant.  As with group 1, the values are
C  hardcoded in BLOCK DATA into EMI(6,IB,IP) and EMI(7,IB,IP), respectively.
C  Future versions of the model may vary these emissions on some other
C  parameter(s) such as model year and vehicle type, in which case the
C  computation / assignment of values would go here.
C
   40 CONTINUE
   50 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE BAGEME
C
C  BAGEME multiplies the effects group sizes times the corresponding
C  weighted emission impact rates to get the tampering bag emission effects.
C
C  Called by TAMPER.
C
C  Input on call:
C
C    common blocks:
C    /EGSCAL/ EGS
C    /EMECAL/ EMI
C    /LOOKUP/ IVTAM
C    /MYCODE/ IDX
C
C  Output on return:
C
C    common blocks:
C    /LOOKUP/ IPG
C    /TAMOUT/ TAMBAG
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  EMSUM    R    tampering emission effects sum for given IVTAM, IDX, IP & IB
C
C  Notes:
C
C  BAGEME is a new subprogram (added for MOBILE3).
C
C
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /EMECAL/ EM3W(3,3,3),EMOX(3,3,3),EMEGR(4,3,3),EMI(7,3,3)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /TAMOUT/ TAMBAG(3,3,20,4),TAMEVP(3,20,4)
C
      DO 30 IP=1,3
C
C  Effects group sizes are identical for HC and CO, but the emissions
C  impacts are not.
C
      IPG=1
      IF(IP.EQ.3) IPG=2
      DO 20 IB=1,3
C
      EMSUM=0.0
      DO 10 IEG=1,7
      EMSUM=EMSUM+EGS(IEG,IPG)*EMI(IEG,IB,IP)
   10 CONTINUE
      TAMBAG(IB,IP,IDX,IVTAM)=EMSUM
C
   20 CONTINUE
   30 CONTINUE
      RETURN
      END
```

```
      SUBROUTINE EVPEME
C
C EVPEME does the work of EFFGRP, EMIRAT and BAGEME, only to produce the
C evaporative and crankcase HC emission effects.  The task is simplified
C into one subroutine because there is no overlap categorization or
C weighting.  The appropriate numbers are looked up and multiplied
C together without modification.
C
C Called by TAMPER.
C
C Calls IGDPTR.
C
C Input on call:
C
C   common blocks:
C   /BASETR/ BTR
C   /EVPDAT/ EVPAER,EVPTGS,EVPEMI
C   /LOOKUP/ IVTAM
C   /MYCODE/ IDX,JDX,LDXSY,LMYRVT
C
C Output on return:
C
C   common blocks:
C   /LOOKUP/ IHG
C   /TAMOUT/ TAMEVP
C
C Local variable dictionary:
C
C  Name   Type              Description
C ------  ----  -------------------------------------------------------
C EMPACT   R    emission impact rate for given IVTAM, IH and IG4
C OTR      R    overall (previous + subsequent my ranges) tampering rate
C PCTEQP   R    percentage of IVTAM fleet equipped with IHG technology,
C               given IG3
C
C Notes:
C
C EVPEME is a new subprogram (added for MOBILE3).
C
C
      COMMON /BASETR/ BTR(7,2),ZMLTAM(7,2,4),DRTAM(7,2,4)
      COMMON /EVPDAT/ EVPAER(2,2),EVPTGS(3,2,4),EVPEMI(11,3,4)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /TAMOUT/ TAMBAG(3,3,20,4),TAMEVP(3,20,4)
C
      DO 10 IH=1,3
C
C Group hot soak and diurnal HC as a single (evap) case when indexing
C base tampering rate, ATP effectiveness rate and technology group size
C arrays.  Only the emission impact rates differ.
C
      IHG=1
      IF(IH.EQ.3) IHG=2
      ID=IHG+5
C
C Get the overall tampering rate.  As in DISRAT, there are 3 cases:
C
```

```
C     (1) No ATP or its start year is after ICY or IDX is not in affected my
C         range: use the "previous" base rate without applying the
C         effectiveness rates.
C
      IF(LMYRVT.EQ.1) OTR=BTR(ID,1)
C
C     (2) There is an ATP and its start year is before IDX and IDX is in the
C         affected my range: use the "subsequent" rate * the effectiveness
C         rate.
C
      IF(LMYRVT.EQ.2.AND.LDXSY.GT.JDX) OTR=BTR(ID,2)*EVPAER(IHG,2)
C
C     (3) There is an ATP and its start year is at or after IDX but before ICY
C         and IDX is in the affected my range: sum the rates * their
C         corresponding effectiveness rates.  Note that in this case, BTR holds
C         the "previous" and overall rates => subtract 1st from 2nd to get the
C         "subsequent" rates.
C
      IF(LMYRVT.EQ.2.AND.LDXSY.LE.JDX)
     1  OTR=BTR(ID,1)*EVPAER(IHG,1)+(BTR(ID,2)-BTR(ID,1))*EVPAER(IHG,2)
C
C  Lookup model year group pointers.
C
      IG3=IGDPTR(3)
      IG4=IGDPTR(4)
C
C  Lookup and apply the percentage equipped and emission impact factors.
C
      PCTEQP=EVPTGS(IG3,IHG,IVTAM)
      EMPACT=EVPEMI(IG4,IH,IVTAM)
      TAMEVP(IH,IDX,IVTAM)=OTR*PCTEQP*EMPACT
   10 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE TECHO(*)
C
C  TECHO determines whether or not to compute the effects groups for the
C  passed in TGSUSE/IQG/IPG values.  If the effects loop is to be completed,
C  TECHO decides what subset of BTR is to be used.
C
C  Called by EFFGRP.
C
C  Input on call:
C
C    common blocks:
C    /BASETR/ BTR
C    /LOOKUP/ IQG,IPG
C    /SIZCAL/ TGSUSE
C
C  Output on return:
C
C    common blocks:
C    /MYCODE/ IAY
C    /SIZCAL/ ATR
C
C  Notes:
C
C  TECHO is a new subprogram (added for MOBILE3).
C
C
      COMMON /BASETR/ BTR(7,2),ZMLTAM(7,2,4),DRTAM(7,2,4)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
C
C  If technology size is 0, branch to the end of the IQG loop.  If no part
C  of the fleet is so equipped, then no tampering effects based on that
C  equipment type can occur.
C
      IF(TGSUSE.EQ.0) RETURN1
C
C  If the technology type does not affect the pollutant group, branch to end
C  of IQG loop.  Tampering vehicles so equipped will not add to the level of
C  the pollutant(s) being emitted.
C
      IF(IQG.GE.4.AND.IPG.EQ.1) RETURN1
      IF(IQG.LE.3.AND.IPG.EQ.2) RETURN1
C
C  Technology size is positive and tampering it affects the pollutant group.
C  The effects groups will be calculated.  First assign the base rates.
C
      DO 20 IAY=1,2
      DO 10 ID=1,7
      ATR(ID,IAY)=BTR(ID,IAY)
   10 CONTINUE
C
C  Zero out rate(s) for case(s) where the type tampering cannot occur, given
C  the technology type.
C
      IF(IQG.EQ.3) ATR(1,IAY)=0.0
      IF(IQG.EQ.6) ATR(5,IAY)=0.0
      IF(IQG.NE.1.AND.IQG.NE.4) GOTO 20
```

```
23058          ATR(2,IAY)=0.0
23059          ATR(3,IAY)=0.0
23060          ATR(4,IAY)=0.0
23061       20 CONTINUE
23062    C
23063          RETURN
23064          END
```

```
      SUBROUTINE C1T07(CSFUSE)
C
C  C1T07 calculates overlap categories 1 to 7 for tampering effects.
C  These cover all the allowable overlap combinations of the 4 base tampering
C  cases for the bag effects for the given pollutant group.
C
C  Called by ADJ12 and EFFGRP.
C
C  Input on call:
C
C    parameter list: CSFUSE
C    common blocks:
C    /LOOKUP/ JPGD
C    /MYCODE/ IAY
C    /SIZCAL/ ATR
C
C  Output on return:
C
C    common block: /SIZCAL/ CSIZE
C
C  Notes:
C
C  C1T07 is a new subprogram (added for MOBILE3).
C
C
      DIMENSION CSFUSE(7)
C
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
C
C  The first 7 category sizes are computed directly from the size coefficient
C  and tampering rates.
C
      DO 10 IC7=1,3
      CSIZE(IC7,IAY)=CSFUSE(IC7)*ATR(JPGD,IAY)
   10 CONTINUE
C
      DO 20 IC7=4,7
      CSIZE(IC7,IAY)=CSFUSE(IC7)*ATR(2,IAY)
   20 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE C8T012
C
C  C8T012 calculates category sizes 8 to 12 for tampering effects.
C  Categories 8 to 11 are the no overlap cases (AIRS only, CATS only, etc.).
C  Category 12 is no tampering at all case.
C
C  Called by ADJ12, A8T011 and EFFGRP.
C
C  Input on call:
C
C    common blocks:
C    /MYCODE/ IAY
C    /SIZPAR/ NTERMS,INDXCS
C    /SIZCAL/ CSIZE
C
C  Output on return:
C
C    common block: /SIZCAL/ CSIZE
C
C  Local array subscripts:
C
C  SUB(4)  -  SUB ( IS )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  C1ST11   R    sum of the first 11 category sizes
C  NT       I    number of terms in SUB(IS)
C  SUB      R    sum of category sizes to be subtracted from ATR to get CSIZE,
C                given IS, for sizes 8 to 11
C
C  Notes:
C
C  C8T012 is a new subprogram (added for MOBILE3).
C
C
      DIMENSION SUB(4)
C
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /SIZPAR/ NTERMS(4),INDXCS(5,4)
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
C
C  Categories 8 to 12 are derived from the first 7.  first sum up the terms to
C  be subtracted.
C
      DO 20 IS=1,4
      NT=NTERMS(IS)
      SUB(IS)=0.0
      DO 10 ICS=1,NT
      SUB(IS)=SUB(IS)+CSIZE(INDXCS(ICS,IS),IAY)
   10 CONTINUE
   20 CONTINUE
C
      DO 30 IC=8,11
      IS=IC-7
      CSIZE(IC,IAY)=ATR(IS,IAY)-SUB(IS)
   30 CONTINUE
```

```
C
C  Assign the 12th category size (= no tampering effect) the residual
C  percentage.
C
      C1ST11=0.0
      DO 40 IC11=1,11
      C1ST11=C1ST11+CSIZE(IC11,IAY)
   40 CONTINUE
      CSIZE(12,IAY)=1.0-C1ST11
C
      RETURN
      END
```

```
      SUBROUTINE A8T011(IC)
C
C  A8T011 adjusts effects category sizes when 1 or more of the no overlap
C  categories 8 to 11 are negative.
C
C  Called by EFFGRP.
C
C  Calls C8T012.
C
C  Input on call:
C
C    parameter list: IC (flags the negative category size)
C    common blocks:
C    /LOOKUP/ JPGD
C    /MYCODE/ IAY
C    /SIZCAL/ CSIZE
C    /SIZPAR/ NTERMS,INDXCS
C
C  Output on return:
C
C    common block: /SIZCAL/ CSIZE
C
C  Local array subscripts:
C
C  ADJFAC(2)  -  ADJFAC ( IADJ )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  ADJFAC   R    adjustment factor computed and used to modify CSIZE
C  DIV      R    divisor in ADJFAC(1) formula = sum of subset of CSIZE
C  NT       R    number of CSIZE terms in DIV
C
C  Notes:
C
C  A8T011 is a new subprogram (added for MOBILE3).
C
C
      DIMENSION ADJFAC(2)
C
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
      COMMON /SIZPAR/ NTERMS(4),INDXCS(5,4)
C
C  Sum up the same terms subtracted off to get CSIZE(IC,IAY).
C
      IS=IC-7
      NT=NTERMS(IS)
      DIV=0.0
      DO 10 ICS=1,NT
      JCS=INDXCS(ICS,IS)
      DIV=DIV+CSIZE(JCS,IAY)
   10 CONTINUE
C
C  Divide the sum into the tamper rate for the no overlap case (no other
C  tamper types occurring) case that is being computed.  The result is the
```

```
C  first adjustment factor.  One minus the result is the second adjustment
C  factor.
C
      IAD=IS
      IF(IAD.EQ.1) IAD=JPGD
      ADJFAC(1)=ATR(IAD,IAY)/DIV
      ADJFAC(2)=1.0-ADJFAC(1)
C
C  Multiply the second adjustment factor times  the appropriate IC overlap
C  case and add to the related no-IC-occurring overlap case.  The uncorrected
C  IC values are required for this step.  Hence, ADJFAC(2) is applied before
C  ADJFAC(1).
C
      IF(IC.EQ.8) CSIZE(6,IAY)=CSIZE(6,IAY)+CSIZE(4,IAY)*ADJFAC(2)
      IF(IC.EQ.8) CSIZE(7,IAY)=CSIZE(7,IAY)+CSIZE(5,IAY)*ADJFAC(2)
      IF(IC.EQ.9) CSIZE(2,IAY)=CSIZE(2,IAY)+CSIZE(4,IAY)*ADJFAC(2)
      IF(IC.EQ.9) CSIZE(3,IAY)=CSIZE(3,IAY)+CSIZE(5,IAY)*ADJFAC(2)
      IF(IC.EQ.10) CSIZE(1,IAY)=CSIZE(1,IAY)+CSIZE(4,IAY)*ADJFAC(2)
      IF(IC.EQ.11) CSIZE(1,IAY)=CSIZE(1,IAY)+CSIZE(5,IAY)*ADJFAC(2)
C
C  Multiply the first adjustment factor times each of IC's overlap cases to
C  correct their values.  This completes the adjustment of sizes 1 to 7.
C
      DO 20 ICS=1,NT
      JCS=INDXCS(ICS,IS)
      CSIZE(JCS,IAY)=CSIZE(JCS,IAY)*ADJFAC(1)
   20 CONTINUE
C
C  Recalculate category sizes 8 to 12.  Use the same code as used on the
C  previous calculation(s).
C
      CALL C8T012
C
C  Size adjustment for category IC is finished.  Note that the process
C  increases the size by decreasing the related overlap category sizes.  The
C  other non-overlap categories will either also increase in size or not be
C  affected.  Fixing one negative 8-11 size will never drive another 8-11 size
C  negative.  The code therefore does not have to go back and check for such
C  a result.
C
      RETURN
      END
```

```
      SUBROUTINE ADJ12(CSF1ST)
C
C  ADJ12 adjusts all category sizes to eliminate a negative category 12
C  size.
C
C  Called by EFFGRP.
C
C  Calls C1TO7 and C8TO12.
C
C  Input on call:
C
C    parameter list: CSF1ST
C    common blocks:
C    /LOOKUP/ IPG
C    /MYCODE/ IAY
C    /SIZCAL/ CSIZE
C
C  Output on return:
C
C    common block: /SIZCAL/ CSIZE
C
C  Local array subscripts:
C
C  CSF2ND(7)  -  CSF2ND ( IC7 )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  CSF2ND   R    category size factor for 2nd calculation of CSIZE;
C                passed to C1TO7
C  ADJSUM   R    adjustment factor to scale down 1st calculation of CSIZE
C
C  Notes:
C
C  ADJ12 is a new subprogram (added for MOBILE3).
C
C
      DIMENSION CSF1ST(7,2),CSF2ND(7)
C
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
C
C  Adjustment sum is sum of the positive emission effect category sizes.
C
      ADJSUM=0.0
      DO 10 IC11=1,11
      ADJSUM=ADJSUM+CSIZE(IC11,IAY)
   10 CONTINUE
C
C  Apply adjustment sum to all the 1st calculation category size factors
C  to get the 2nd calculation size factors.
C
      DO 20 IC7=1,7
      CSF2ND(IC7)=ADJSUM*CSF1ST(IC7,IPG)
   20 CONTINUE
C
```

```
C  Now recalculate all 12 category sizes.  category size 12 will go to 0.0
C  (the sum of the first 11 sizes will become 1.0).
C
      CALL C1TO7(CSF2ND)
      CALL C8TO12
C
C  Check if any of the sizes for 8 to 11 went negative on the recalculation.
C
      DO 30 IC=8,11
      IF(CSIZE(IC,IAY).LT.0) CALL A8TO11(IC)
   30 CONTINUE
C
C  2nd adjustments to 8-11 will not drive 12 negative, due to the changed
C  CSF's.  Hence, we do not need to check 12 again.  Checking again would make
C  the whole procedure recursive and probably open to infinite loops.
C
      RETURN
      END
```

```
      SUBROUTINE ATPEFF(*)
C
C  ATPEFF applies the anti-tampering effectiveness factors to the 11
C  positive tampering effect categories.
C
C  Called by EFFGRP.
C
C  Input on call:
C
C    common blocks:
C    /EGSCAL/ AER
C    /LOOKUP/ IPG
C    /MYCODE/ IAY
C    /SIZCAL/ CSIZE
C
C  Output on return:
C
C    common block: /SIZCAL/ CSAE
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------
C  C1ST11   R    sum of first 11 category sizes, assigned as 12th category
C                size
C
C  Notes:
C
C  ATPEFF is a new subprogram (added for MOBILE3).
C
C
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
C
C  The sum of the 11 positive categories will be subtracted from 1.0 to get
C  the 12th, no effect, category.
C
      C1ST11=0.0
C
C  ATP effectiveness modified size ICOL will be the product of the entire
C  unmodified row size vector times the ICOL'th column of the effectiveness
C  matrix for the given pollutant group and pre/post ATP year case.
C
C  The effectiveness matrices are currently identical.  Each has the major
C  diagonal all 1.0's and all other cells 0.0.  the result of this subroutine
C  is thus to merely echo CSIZE into CSAE with no changes.
C
      DO 20 ICOL=1,11
      CSAE(ICOL)=0.0
C
      DO 10 IROW=1,11
      CSAE(ICOL)=CSAE(ICOL)+CSIZE(IROW,IAY)*AER(IROW,ICOL,IPG,IAY)
   10 CONTINUE
C
      C1ST11=C1ST11+CSAE(ICOL)
   20 CONTINUE
```

```
C
C  The no effects case is not used hereafter.  It is only computed for
C  error checking.
C
      CSAE(12)=1.0-C1ST11
      RETURN1
      END
```

```
      SUBROUTINE SETEGS
C
C  SETEGS sets the effects group sizes by combining subsets of the
C  overlap category sizes and weighting by the technology group sizes.
C
C  Called by EFFGRP.
C
C  Input on call:
C
C    common blocks:
C    /LOOKUP/ IQG,IPG
C    /SIZCAL/ TGSUSE,CSAE
C
C  Output on return:
C
C    common block: /EGSCAL/ EGS
C
C  Local array subscripts:
C
C  INDXEG(6,7,2)  -  INDXEG ( IC, IEG, IPG )
C  INDXPG(2,2)    -  INDXPG ( ILU, IPG )
C  NEGC(7,2)      -  NEGC ( IEG, IPG )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  INDXEG   I    secondary index array: pointers to category sizes
C                in IEG's size sum, given IPG
C  INDXPG   I    loop indices array: first and last nonzero effects group
C                sizes, given IPG
C  NC       I    loop test value: number of category sizes in IEG's size
C                equation, given IPG
C  NEGC     I    loop test values array: looks up NC
C
C  Notes:
C
C  SETEGS is a new subprogram (added for MOBILE3).
C
C
      DIMENSION INDXPG(2,2),NEGC(7,2),INDXEG(6,7,2)
C
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
C
      DATA INDXPG/1,4, 3,7/,NEGC/1,1,6,4,3*0, 2*0,3,2,1,3,2/
      DATA INDXEG/
     1  8,5*0, 8,5*0, 1,4,5,6,7,9, 2,3,10,11,2*0, 6*0, 6*0, 6*0,
     2  6*0, 6*0, 6,7,9,3*0, 10,11,4*0, 8,5*0, 1,4,5,3*0, 2,3,4*0/
C
C  Do not compute group sizes for cases known to be always 0 (5-7 for HC/CO
C  and 1-2 for NOX).
C
      IE1ST=INDXPG(1,IPG)
      IELST=INDXPG(2,IPG)
C
C  Equipment = air pump /catalyst => air pump disablement (air pump only
```

```
C                                   equipped) effects group increment = 0.0
C
      IF(IQG.EQ.2.AND.IPG.EQ.1) IE1ST=2
C
C  Converse air pump case:
C
C  Equipment = air pump only => only effects group 1 (ap only disabled) > 0.0
C
      IF(IQG.EQ.1.AND.IPG.EQ.1) IELST=1
C
C  For each effects group IEG, the size is the sum of the product of the
C  related category sizes times the technology group size for the technology
C  type IQG being evaluated on this pass.
C
      DO 20 IEG=IE1ST,IELST
C
C  Get the number of categories involved in group IEG.
C
      NC=NEGC(IEG,IPG)
C
C  Now do the sum.
C
      DO 10 IC=1,NC
      JCS=INDXEG(IC,IEG,IPG)
      EGS(IEG,IPG)=EGS(IEG,IPG)+TGSUSE*CSAE(JCS)
   10 CONTINUE
   20 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE BIGCFX(ICY,IR,SALHCF)
C
C  BIGCFX computes correction factors applied to composite emission
C  factors, e.g., speed, temperature, humidity, etc.
C
C  Called by EFCALX.
C
C  Calls ALUH, IGPPTR, ISPPTR, ISPPT8, ITCPTR and SPFCLX.
C
C  Input on call:
C
C    parameter list: ICY,IR
C    common blocks:
C    /ACOM/   AIN
C    /BEFGCM/ EXMETH
C    /CUMCOM/ CUMMIL
C    /FLAGS2/ ALHFLG
C    /FLAGS3/ NMHFLG
C    /GPCCOM/ GPACOF,GPBCOF
C    /IVPCOM/ IVPTRG,IVPTRT,IVPTRA,IVPTRB
C    /LNKCOM/ SPD,AMBT,PCCN,PCHC,PCCC
C    /SYSCOM/ MAXVEH,MAXPOL
C    /TAMOUT/ TAMBAG
C    /TCCOM1/ TTACOF,TT4COF,TT7COF
C
C  Output on return:
C
C    parameter list: SALFCF
C    common blocks:
C    /OFFCOM/ OFFCO,OFFMTH
C    /OMTCOM/ OMTCF,OMTTAM
C    /RET1/   ALHRET
C
C  Local array subscripts:
C
C  CHFHDG(3)        -  CHFHDG ( IB )
C  CHFRAC(3)        -  CHFRAC ( IB )
C  FTPSPD(3)        -  FTPSPD ( IB )
C  ISPGRP(3,4)      -  ISPGRP ( IP, IVA )
C  NCATYR(8)        -  NCATYR ( IV )
C  SALHCF(20,3,8)   -  SALHCF ( IDX, IP, IV )
C  SCFADJ(3,4)      -  SCFADJ ( IP, IVA )
C  TCF(3)           -  TCF ( IB )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  CHFHDG   R    HDGV operating mode fractions (cold, hot stabilized and
C                hot start fractions of HDGV vmt, hardcoded)
C  CHFRAC   R    computed operating mode fractions for given MY & IV
C  COMT     R    working location for operating mode and temperature c.f. to
C                be multiplied times the base emission factor
C  FCC      R    fraction of vmt in cold start mode, vehicle catalyst equipped
C  FCN      R    fraction of vmt in cold start mode, non-catalyst equipped
C  FHC      R    fraction of vmt in hot start mode, catalyst equipped
C  FHN      R    fraction of vmt in hot start mode, non-catalyst equipped
C  FTPSPD   R    FTP standard speeds for the 3 operating modes
```

```
C  ICOEFF   I    pointer to term in 5th degree polynomial scf equation
C  ISADJ    I    integer location used in rounding the scenario's SADJ
C  ISAVE    I    save location for scf pointer IG (its value can be changed
C                for 1 used & then restored for a later use)
C  ISPGRP   I    the speed coefficient group last used for the given IV & IP.
C                ISPGRP eliminates recalculating SCFADJ for every MY.
C  MDLOHI   I    TCF case: 0 = mid (no correction), 1 = low, 2 = high
C  NCATYR   I    last non-catalyst MY for the given IV
C  OMT      R    unweighted product of operating mode vmt fraction times
C                temperature correction factor
C  S        R    vehicle speed from SPD, given IV
C  SADJ     R    FTP operating mode speeds weighted together by the vmt
C                fraction for each to get scenario's average speed
C  SALHCF   R    see parameter dictionary
C  SCFADJ   R    SPBACK adjustment for the difference between 19.6 and SADJ
C  SPBACK   R    see parameter dictionary
C  SPDGPB   R    accumulator: stores scf calculations for subgroup IVB
C  TCF      R    temperature correction factor for each bag
C  TOMT     R    tampering offset adjusted for operating mode & temperature
C  TT       R    difference between entered ambient temperature & 75 degrees F
C  XMILES   R    cumulative mileage in ICY for IV from MY scaled by 10**-4
C
C  Notes:
C
C  The critical tampering application code changes occurred here & in BEF.
C  CFRET is now SALHCF and holds only the speed correction factor and the
C  optional ALUH correction factor.  OMTCF holds the operating mode and
C  temperature correction factors to be multiplied times the base composite
C  ef.  OMTTAM is the same correction factors already applied to the bag
C  tampering effects and is to be added to the composite ef after OMTCF and
C  PCLEFT have been applied.
C
C  TAMOUT serves the same function in the OMTTAM computation that GPACOF
C  and XMILES serve in OMTCF's: the base factor/additive.
C
C  The speed correction factor code was separated from the bag data code,
C  since CFRET was split.
C  The special speed correction equation for HDDV NOX was implemented.
C
C  A new temperature correction factor pointer function, ITCPTR, was
C  added.  This was required since the normalized bag fraction and
C  temperature correction years no longer coincided as they did in  MOBILE2.
C  The temperature correction base was changed from 68F to 75F.
C
C  The methane offset model was encoded.  The methane adjustment was changed
C  from a multiplicative to a subtractive factor.  The methane offset "MTHOFF"
C  is calculated by bag (or composite) and passed to BEF via the common block
C  OFFCOM.  The idle methane factor is calculated in BEFIDL.
C
C  The offset model was introduced for CO bagl.  The values calculated
C  by the model are placed into the array variable "OFFSET" and passed
C  to subroutine BEF via common block OFFCOM.
C
C
      INTEGER ALHFLG,ATPFLG,PRTFLG
C
      COMMON /ACOM/   AIN(6,21,3)
      COMMON /BEFGCM/ EXMETH(3,5,8,2),MYGEXM(5,8,2)
```

```
      COMMON /CUMCOM/ CUMMIL(20,8)
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /GPCCOM/ GPACOF(8,13,3,6),GPBCOF(3,3,3,4)
      COMMON /IVPCOM/ IVPTRG(8),IVPTRT(8),IVPTRA(8),IVPTRB(8)
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /OFFCOM/ OFFCO(20,3),OFFMTH(20,8)
      COMMON /OMTCOM/ OMTCF(20,3,8),OMTTAM(20,3,4)
      COMMON /RET1/   ALHRET(20,4,3)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /TAMOUT/ TAMBAG(3,3,20,4),TAMEVP(3,20,4)
      COMMON /TCCOM1/ TTACOF(2,3,9,3,6),TT4COF(2,9,3),TT7COF(2,3)
C
      DIMENSION FTPSPD(3),SPBACK(21,3,8),SCFADJ(3,4),ISPGRP(3,4)
      DIMENSION SALHCF(20,3,8)
      DIMENSION TCF(3),CHFRAC(3),NCATYR(8),CHFHDG(3)
C
      DATA FTPSPD/26.0,16.0,26.0/
      DATA NCATYR/1974,1974,1978,1983,2020,2020,2020,2020/
      DATA CHFHDG/.206,.521,.273/
C
C  Calculate average speed for the operating mode fractions.
C
      SADJ=PCCC/FTPSPD(1)
     -    +(100.-PCCC-PCHC)/FTPSPD(2)
     -    +PCHC/FTPSPD(3)
      SADJ=100./SADJ
      ISADJ=SADJ*10.+0.5
      SADJ=ISADJ/10.
C
C  Get IVA unweighted scf's and optional correction factors.
C
      CALL SPFCLX(SPD,SPBACK)
      IF(ALHFLG.GT.1) CALL ALUH(ICY,IR)
C
C  Compute operating mode fractions.
C
      FCN=PCCN*.01
      FHC=PCHC*.01
      FCC=PCCC*.01
      FHN=(FCC-FCN)+FHC
C
C  Setup for temperature correction factor loop:
C
C  Decide tcf case.
C
      IF(AMBT.LT.75.) GOTO 12
      IF(AMBT.GT.75.) GOTO 14
C
C  No correction => set multiplicative tcf to unity.
C
      MDLOHI=0
      DO 10 IB=1,3
      TCF(IB)=1.
   10 CONTINUE
      GOTO 20
C
C  Ambient temperature is below FTP standard.
```

```
C
   12 MDLOHI=1
      TT=AMBT-75.0
      GOTO 20
C
C  Ambient temperature is above FTP standard.
C
   14 MDLOHI=2
      TT=AMBT-75.
C
C  Compute speed and temperature correction factors.
C
   20 DO 90 IDX=1,20
      JDX=21-IDX
      MY=ICY-(20-IDX)
C
      DO 90 IV=1,MAXVEH
      IVG=IVPTRG(IV)
      IVT=IVPTRT(IV)
      IVA=IVPTRA(IV)
      IVB=IVPTRB(IV)
      GOTO(22,22,22,26,24,24,26,24),IV
   22 ISP=ISPPTR(MY,IR,IVG)
   24 XMILES=CUMMIL(JDX,IV)*.0001
C
   26 DO 90 IP=1,MAXPOL
      IF(IV.EQ.8) ISP=ISPPT8(MY,IR,IP)
      IG=IGPPTR(MY,IP,IR,IV)
      IT=ITCPTR(MY,IP,IR,IV)
      GOTO(28,28,28,32,28,28,32,28),IV
C
C  Assign cold/hot fractions by model year group.
C
   28 CHFRAC(1)=FCN
      CHFRAC(3)=FHN
      IF(MY.LE.NCATYR(IV)) GOTO 30
      CHFRAC(1)=FCC
      CHFRAC(3)=FHC
   30 CHFRAC(2)=1.-CHFRAC(1)-CHFRAC(3)
C
C  Temperature correction factor (TCF) section.
C
   32 IF(MDLOHI.EQ.0) GOTO 44
      GOTO(34,34,34,38,34,34,40,34),IV
C
C  Lo/hi TCF for LDGV, LDGT1, LDGT2, LDDV, LDDT, and MC.
C
   34 DO 36 IB=1,3
      TCF(IB)=EXP(TTACOF(MDLOHI,IB,IT,IP,IVT)*TT)
   36 CONTINUE
C
C  Use offset model if CO, low or high altitude, low temperature,
C  and my=1980+ for LDGV, my=1984+ for LDGT
C
      IF(IP.NE.2.OR.IV.GE.4.OR.MDLOHI.NE.1) GOTO 44
      IF(IV.EQ.1.AND.MY.LT.1980) GOTO 44
      IF((IV.EQ.2.OR.IV.EQ.3).AND.MY.LT.1984) GOTO 44
      TCF(1)=-1.3812*(AMBT-75.)
```

```
      GOTO 44
C
C  Lo/hi TCF for HDGV
C
   38 TCF(1)=EXP(TT4COF(MDLOHI,IT,IP)*TT)
      GOTO 44
C
C  Lo/hi TCF for HDDV
C
   40 TCF(1)=EXP(TT7COF(MDLOHI,IP)*TT)
C
C  Speed correction factor section
C
   44 GOTO(52,52,52,46,48,48,48,52),IV
C
C  SCF for HDGV, LDDV, LDDT, and HDDV.
C  Use SCF coefficients from GPBCOF table.
C  If HDDV and NOX, use special SCF equation.
C
   46 IF(IG.EQ.3) IG=2
   48 ISAVE=IG
      IF(IG.GT.3) IG=3
      S=SPD(IV)
      IF(IV.EQ.4.OR.IV.EQ.7)
     *    SPDGPB=GPBCOF(3,IP,IG,IVB)*S*S
     *           +GPBCOF(2,IP,IG,IVB)*S
     *           +GPBCOF(1,IP,IG,IVB)
      IF(IV.EQ.5.OR.IV.EQ.6)
     *    SPDGPB=GPBCOF(3,IP,IG,IVB)*(S*S-SADJ*SADJ)
     *           +GPBCOF(2,IP,IG,IVB)*(S-SADJ)
      IF(IV.NE.4.OR.IP.NE.3) SPDGPB=EXP(SPDGPB)
      SALHCF(IDX,IP,IV)=SPDGPB
      IG=ISAVE
      GOTO 62
C
C  SCF for LDGV, LDGT1, LDGT2 and MC.
C
   52 IF(IDX.GT.1.AND.ISPGRP(IP,IVA).EQ.ISP) GOTO 58
C
      SCF=AIN(6,ISP,IP)
      DO 54 ICOEFF=1,5
      SCF=SCF*SADJ+AIN(6-ICOEFF,ISP,IP)
   54 CONTINUE
      IF(IP.NE.3.OR.IP.EQ.3.AND.ISP.GE.19) SCF=EXP(SCF)
      SCFADJ(IP,IVA)=SCF
      ISPGRP(IP,IVA)=ISP
C
   58 SALHCF(IDX,IP,IV)=SPBACK(ISP,IP,IV)/SCFADJ(IP,IVA)
C
C  If optional corrections selected, correct LDGV, LDGT1, LDGT2 and MC
C  for air conditioning, extra load, trailer towing and/or humidity.
C
      IF(ALHFLG.GT.1)
     1  SALHCF(IDX,IP,IV)=SALHCF(IDX,IP,IV)*ALHRET(IDX,IVA,IP)
C
C  Multiplicative corrections for operating mode and temperature and
C  additive corrections for tampering, CO and methane are done in the final
C  section.
```

```
30290     C
30291     C  HDV types are simpler: there are no operating mode corrections, only 1
30292     C  temperature cf and no CO offset.
30293     C
30294        62 IF(IV.NE.4.AND.IV.NE.7) GOTO 74
30295           OMTCF(IDX,IP,IV)=TCF(1)
30296     C
30297     C  HDGV by bag tampering effects recombined and corrected for temperature:
30298     C
30299           IF(IV.EQ.7) GOTO 70
30300           TOMT=0.0
30301           DO 66 IB=1,3
30302           TOMT=TOMT+CHFHDG(IB)*TAMBAG(IB,IP,IDX,IV)
30303        66 CONTINUE
30304           OMTTAM(IDX,IP,IV)=TOMT*TCF(1)
30305     C
30306     C  Check for methane offset.
30307     C
30308        70 IF(IP.EQ.1) OFFMTH(IDX,IV)=0.0
30309           IF(IP.NE.1.OR.NMHFLG.EQ.1) GOTO 90
30310           IEX=IEXMPT(MY,IV,IR)
30311           OFFMTH(IDX,IV)=EXMETH(1,IEX,IV,IR)
30312           GOTO 90
30313     C
30314     C  LDV/T and MC:
30315     C
30316     C  (1) Bag loop multiplies previously computed op mode & temp corr factors
30317     C      times the appropriate RIPSTWXN bag term coefficient and times the
30318     C      tampering bag emissions effect, if LDGV/T.
30319     C  (2) If bag 1 CO offset used, save additive factor.
30320     C  (3) Calculate methane offset with bag fractions and temperature
30321     C      correction factors included.
30322     C
30323        74 COMT=0.0
30324           TOMT=0.0
30325           IF(IV.LE.3.AND.IP.EQ.2) OFFCO(IDX,IV)=0.0
30326           IF(IP.EQ.1) OFFMTH(IDX,IV)=0.0
30327     C
30328           DO 86 IB=1,3
30329           OMT=CHFRAC(IB)*TCF(IB)
30330     C
30331     C  Methane offset
30332     C
30333           IF(IP.NE.1.OR.NMHFLG.EQ.1) GOTO 78
30334           IEX=IEXMPT(MY,IV,IR)
30335           OFFMTH(IDX,IV)=OFFMTH(IDX,IV)+EXMETH(IB,IEX,IV,IR)*OMT
30336     C
30337     C  CO offset
30338     C
30339        78 IF(IB.NE.1.OR.IP.NE.2.OR.IV.GE.4.OR.MDLOHI.NE.1)
30340          *  GOTO 82
30341           IF(IV.EQ.1.AND.MY.LT.1980) GOTO 82
30342           IF((IV.EQ.2.OR.IV.EQ.3).AND.MY.LT.1984) GOTO 82
30343           OFFCO(IDX,IV)=OMT
30344           COMT=COMT+CHFRAC(IB)
30345          1     *(GPACOF(2*IB,IG,IP,IVG)*XMILES+GPACOF(2*IB-1,IG,IP,IVG))
30346           GOTO 86
30347     C
```

```
C  No CO offset
C
   82 COMT=COMT+OMT
     1     *(GPACOF(2*IB,IG,IP,IVG)*XMILES+GPACOF(2*IB-1,IG,IP,IVG))
C
      IF(IV.LE.3) TOMT=TOMT+OMT*TAMBAG(IB,IP,IDX,IV)
   86 CONTINUE
C
C  Complete normalization & assign to corrections arrays.
C
      OMTCF(IDX,IP,IV)=COMT/
     1                 (GPACOF(8,IG,IP,IVG)*XMILES+GPACOF(7,IG,IP,IVG))
      IF(IV.LE.3) OMTTAM(IDX,IP,IV)=TOMT
C
   90 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE SPFCLX(SPARA,SPBACK)
C
C  SPFCLX evaluates the 5th degree polynomial speed correction factor
C  equation for all 8 IV, 3 IP and 21 IG.  For HC, CO and 1 case of NOx, the
C  results are exponentiated.
C
C  Called by BIGCFX.
C
C  Input on call:
C
C    parameter list: SPARA
C    common blocks:
C    /ACOM/   AIN
C    /SYSCOM/ MAXVEH,MAXPOL
C
C  Output on return:
C
C    parameter list: SPBACK
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  AVESPD   R    average speed for the vehicle type IV
C  SCF      R    speed correction factor for the given IV, IP and IG
C
C  Notes:
C
C  Although calculated for all 8 IV, the results are only used by BIGCFX for
C  subgroup IVA (LDGV, LDGT1/2, MC).
C
C
      COMMON /ACOM/   AIN(6,21,3)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      DIMENSION SPARA(8),SPBACK(21,3,8)
C
      DO 20 IV=1,MAXVEH
      AVESPD=SPARA(IV)
C
      DO 20 IP=1,MAXPOL
C
      DO 20 ISP=1,21
      SCF=AIN(6,ISP,IP)
C
      DO 10 ICOEFF=1,5
      SCF=SCF*AVESPD+AIN(6-ICOEFF,ISP,IP)
   10 CONTINUE
C
      IF(IP.NE.3.OR.IP.EQ.3.AND.ISP.GE.19) SCF=EXP(SCF)
      SPBACK(ISP,IP,IV)=SCF
   20 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE ALUH(ICY,IR)
C
C ALUH computes emission correction factors for air conditioning, extra
C loading, trailer towing and humidity for vehicle types  LDGV, LDGT1, LDGT2
C and LDGT (composite of LDGT1 & LDGT2).  Additionally, the humidity
C correction is applied to MC vehicles.
C
C Called by BIGCFX.
C
C Calls IGEPTR, IGLPTR, IGTPTR and IGUPTR.
C
C Input on call:
C
C   parameter list: ICY,IR
C   common blocks:
C   /ALUHAC/ ACEQIP,ACCF
C   /ALUHLT/ XLCF,TWCF
C   /LNKCOM/ AMBT
C   /SYSCOM/ MAXLTW,MAXPOL
C   /XCFS1/  XLOAD,TRAILR,ABSHUM,DB,WB
C
C Output on return:
C
C   common blocks:
C   /RET1/   ALHRET
C   /XCFS1/  AC
C
C Local variable dictionary:
C
C  Name   Type              Description
C ------  ----  ------------------------------------------------------
C ACU      R    fraction of vehicles that are equipped with air conditioning
C                and are using it
C DI       R    discomfort index computed from the user supplied (default)
C                values of dry bulb (db) and wet bulb (wb) temperatures
C DIHI     R    high reference temperature for DI: above this temperature
C                AC is on (100% use)
C DILO     R    low reference temperature for DI: below this temperature
C                AC is off (0% use)
C HH       R    HC or CO => 1.; NOx => humidity correction factor
C HHH      R    HC or CO => 1.; NOx => humidity correction factor
C TT       R    deviation from FTP standard temperature (75 degrees F)
C TWU      R    fraction of vehicles towing a trailer
C XLU      R    fraction of vehicle s with an extra load
C
C Notes:
C
C The humidity correction factor formula was changed from
C 1.-0.0047*(ABSHUM-75) to 1.-0.0042*(ABSHUM-75).
C
C
      COMMON /ALUHAC/ ACEQIP(8,3,2),ACCF(2,3,2,3,2)
      COMMON /ALUHLT/ XLCF(3,6,3,2),TWCF(3,6,3,2)
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /RET1/   ALHRET(20,4,3)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /XCFS1/  AC,XLOAD(3),TRAILR(3),ABSHUM,DB,WB
C
```

```
C
      DATA DILO/70./
      DATA DIHI/80./
C
      IF(AC.EQ.0.) GOTO 10
C
C  Compute AC based on discomfort index DI.
C
      DI=(DB+WB)*.4+15.
      AC=(DI-DILO)/(DIHI-DILO)
      IF(AC.LT.0.) AC=0.0
      IF(AC.GT.1.) AC=1.
C
C  Setup humidity correction factors.
C
   10 TT=AMBT-75.
      HHH=1.-0.00380*(ABSHUM-75.)
C
C  Assign MC only for IP=3.
C
      DO 20 IDX=1,20
      ALHRET(IDX,4,1)=1.
      ALHRET(IDX,4,2)=1.
      ALHRET(IDX,4,3)=HHH
   20 CONTINUE
C
C  Assign other vehicle correction factors.
C
      DO 40 IVA=1,MAXLTW
      XLU=XLOAD(IVA)
      TWU=TRAILR(IVA)
C
      DO 30 IDX=1,20
      MY=ICY-(20-IDX)
      IGU=IGUPTR(MY,IVA,IR)
      IGE=IGEPTR(MY,IVA,IR)
      IGL=IGLPTR(MY,IVA,IR)
      IGT=IGTPTR(MY,IVA,IR)
      ACU=ACEQIP(IGE,IVA,IR)*AC
C
      DO 30 IP=1,MAXPOL
      HH=1.
      IF(IP.EQ.3) HH=HHH
      ALHRET(IDX,IVA,IP)=
     *   ((ACCF(2,IP,IGU,IVA,IR)*TT+ACCF(1,IP,IGU,IVA,IR)-1.)*ACU+1.)
     *  *((XLCF(IP,IGL,IVA,IR)-1.)*XLU+1.)
     *  *((TWCF(IP,IGT,IVA,IR)-1.)*TWU+1.)
     *  *HH
   30 CONTINUE
C
   40 CONTINUE
C
      RETURN
      END
```

```
      FUNCTION CCEVRT(MY,IDX,IV,IR)
C
C  CCEVRT is a REAL-valued function that returns a hydrocarbon combined
C  evaporative (hot soak + diurnal) and crankcase emission factor.  The
C  hot soak value is weighted by trips per day and the evaporative sum is
C  weighted by miles per day.
C
C  Called by EFCALX.
C
C  Calls CRANKC, DIURNL, HOTSOK, TPD and XMPD.
C
C  Input on call:
C
C    parameter list: MY,IDX,IV,IR
C    common block: /TAMOUT/ TAMEVP
C
C  Output on return:
C
C    function: CCEVRT
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  -------------------------------------------------------
C  CC       R    crankcase HC effect = CRANKC + tampering cc offset, if any
C  DI       R    diurnal   HC effect = DIURNL + tampering di offset, if any
C  HS       R    hot soak  HC effect = HOTSOK + tampering hs offset, if any
C  MPD      R    miles per day from XMPD: divide into evaporative HC sum
C
C  Notes:
C
C  Hot soak, diurnal and crankcase tampering HC effects are added into their
C  corresponding without-tampering HC effects (from BLOCK DATA lookups).
C  The additions are done before miles per day and trips per day are applied
C  as weights.
C
C
      REAL MPD,HS
C
      COMMON /TAMOUT/ TAMBAG(3,3,20,4),TAMEVP(3,20,4)
C
      CCEVRT=0.0
      MPD=XMPD(MY,IV,IR)
      IF(MPD.EQ.0.0) GOTO 90
C
C  Look up the untampered evap & crankcase emissions.
C
      HS=HOTSOK(MY,IV,IR)
      DI=DIURNL(MY,IV,IR)
      CC=CRANKC(MY,IV,IR)
C
C  GV/T => tampering evap & crankcase HC effects are to be added.
C
      IF(IV.GT.4) GOTO 10
      HS=HS+TAMEVP(1,IDX,IV)
      DI=DI+TAMEVP(2,IDX,IV)
      CC=CC+TAMEVP(3,IDX,IV)
C
```

```
33058        10  CCEVRT=(HS*TPD(MY,IV,IR)+DI)/MPD+CC
33059     C
33060        90 RETURN
33061           END
```

```
      FUNCTION HOTSOK(MY,IV,IR)
C
C  HOTSOK selects the yearly value for hot soak HC.
C
C  Called by CCEVRT.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IV,IR
C    common block: /HOTCOM/ MAXHOT,HOTVAL,MYGHOT
C
C  Output on return:
C
C    function: HOTSOK
C
C
      COMMON /HOTCOM/ MAXHOT,HOTVAL(13,8,2),MYGHOT(13,8,2)
C
      DO 10 IG=1,MAXHOT
      IF(MY.LE.MYGHOT(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(HOTVAL(IG,IV,IR),1,60,MY)
   20 HOTSOK=HOTVAL(IG,IV,IR)
C
      RETURN
      END
```

```
      FUNCTION TPD(MY,IV,IR)
C
C  TPD selects the yearly value for trips/day.
C
C  Called by CCEVRT.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IV,IR
C    common block: /TPDCOM/ MAXTPD,TPDVAL,MYGTPD
C
C  Output on return:
C
C    function: TPD
C
C
      COMMON /TPDCOM/ MAXTPD,TPDVAL(2,8,2),MYGTPD(2,8,2)
C
      DO 10 IG=1,MAXTPD
      IF(MY.LE.MYGTPD(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(TPDVAL(IG,IV,IR),2,60,MY)
   20 TPD=TPDVAL(IG,IV,IR)
C
      RETURN
      END
```

```
      FUNCTION DIURNL(MY,IV,IR)
C
C  DIURNL selects the yearly value for diurnal HC.
C
C  Called by CCEVRT.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IV,IR
C    common block: /DIUCOM/ MAXDIU,DIUVAL,MYGDIU
C
C  Output on return:
C
C    function: DIURNL
C
C
      COMMON /DIUCOM/ MAXDIU,DIUVAL(13,8,2),MYGDIU(13,8,2)
C
      DO 10 IG=1,MAXDIU
      IF(MY.LE.MYGDIU(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(DIUVAL(IG,IV,IR),3,60,MY)
   20 DIURNL=DIUVAL(IG,IV,IR)
C
      RETURN
      END
```

```
      FUNCTION XMPD(MY,IV,IR)
C
C  XMPD selects the yearly value for miles/day.
C
C  Called by CCEVRT.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IV,IR
C    common block: /XMPCOM/ MAXXMP,XMPVAL,MYGMPD
C
C  Output on return:
C
C    function: XMPD
C
C
      COMMON /XMPCOM/ MAXXMP,XMPVAL(2,8,2),MYGMPD(2,8,2)
C
      DO 10 IG=1,MAXXMP
      IF(MY.LE.MYGMPD(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(XMPVAL(IG,IV,IR),4,60,MY)
   20 XMPD=XMPVAL(IG,IV,IR)
C
      RETURN
      END
```

```
      FUNCTION CRANKC(MY,IV,IR)
C
C  CRANKC selects the yearly value for crankcase HC.
C
C  Called by CCEVRT.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IV,IR
C    common block: /CRACOM/ MAXCRA,CRAVAL,MYGCRA
C
C  Output on return:
C
C    function: CRANKC
C
C
      COMMON /CRACOM/ MAXCRA,CRAVAL(3,8,2),MYGCRA(3,8,2)
C
      DO 10 IG=1,MAXCRA
      IF(MY.LE.MYGCRA(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(CRAVAL(IG,IV,IR),5,60,MY)
   20 CRANKC=CRAVAL(IG,IV,IR)
C
      RETURN
      END
```

```
      FUNCTION BEF(MY,IDX,ICY,IG,IP,IV,IR,VMTAGE)
C
C  BEF returns the basic emission factor adjusted for operating mode,
C  CO offset, methane offset, temperature, inspection / maintenance and
C  tampering offset.
C
C  Called by EFCALX.
C
C  Calls PCLEFT.
C
C  Input on call:
C
C    parameter list: MY,IDX,ICY,IG,IP,IV,IR,VMTAGE
C    common blocks:
C    /BEFCMD/ DRBEF
C    /BEFCMZ/ ZMLBEF
C    /OFFCOM/ OFFCO,OFFMTH
C    /OMTCOM/ OMTCF,OMTTAM
C
C  Output on return:
C
C    function: BEF
C
C  Notes:
C
C  The offsets (additive instead of MOBILE2's multiplicative) for CO bag 1
C  and methane were encoded.  The new tampering offset was inserted.
C  The operating mode and temperature multiplicative correction factor was
C  split from the old CFRET and moved from EFCALX to BEF for application.
C
C
      COMMON /BEFCMD/ DRBEF(20,3,8,2)
      COMMON /BEFCMZ/ ZMLBEF(20,3,8,2)
      COMMON /OFFCOM/ OFFCO(20,3),OFFMTH(20,8)
      COMMON /OMTCOM/ OMTCF(20,3,8),OMTTAM(20,3,4)
C
C  Look up base & deterioration rates and apply my cumulative mileage.
C
      BEF=ZMLBEF(IG,IP,IV,IR)+DRBEF(IG,IP,IV,IR)*VMTAGE
C
C  Adjust for operating mode, offset model (CO, LDGV & LDGT only),
C  methane offset (HC only), temperature & inspection / maintenance.
C
      IF(IV.LE.3.AND.IP.EQ.2)
     *   BEF=(BEF*OMTCF(IDX,IP,IV)+OFFCO(IDX,IV))*PCLEFT(MY,ICY,IP,IV)
      IF(IP.EQ.1)
     *   BEF=(BEF*OMTCF(IDX,IP,IV)-OFFMTH(IDX,IV))*PCLEFT(MY,ICY,IP,IV)
      IF(IP.EQ.3.OR.IV.GT.3.AND.IP.EQ.2)
     *   BEF=BEF*OMTCF(IDX,IP,IV)*PCLEFT(MY,ICY,IP,IV)
C
C  GV/T => add corrected (for op mode & temp) tampering bag emissions.
C
      IF(IV.LE.4) BEF=BEF+OMTTAM(IDX,IP,IV)
C
      RETURN
      END
```

```
      FUNCTION PCLEFT(MY,ICY,IP,IV)
C
C  PCLEFT determines the basic emission factor multiplicative adjustment
C  ( = percentage left of BEF = PCLEFT ) for the effects of an inspection /
C  maintanance (I/M) program, after checking whether or not I/M applies to the
C  factor being computed by the calling function.
C
C  Called by BEF.
C
C  Input on call:
C
C    parameter list: MY,ICY,IP,IV
C    common blocks:
C    /FLAGS2/ IMFLAG
C    /IMCR12/ CRED12
C    /IMCR4P/ CRED4P
C    /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
C    /IMPAR2/ ILDT,ITEST,ICUTS
C
C  Output on return:
C
C    function: PCLEFT
C
C  Local array subscripts:
C
C  MYGIM(10,3) - MYGIM ( ITECH, IVIM )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  AGE1ST   I    age of the vehicle at first inspection
C  BY       I    benefit year for technology 1 or 2 vehicle
C  IBY      I    benefit year for technology 4 plus vehicle
C  IREM     I    remainder = stringency - greatest multiple of 10 < stringency
C  ISTRN    I    stringency index into technology 1 or 2 credits array
C  ITECH    I    emissions control technology as f(model year, vehicle type)
C  MYGIM    I    model year groups for I/M pollution control technologies
C  REM      R    IREM converted to REAL value
C
C  Notes:
C
C  PCLEFT has been completely rewritten.  Credits are now read in and stored
C  as type REAL.  Technology IV+ modeling is changed.  For example, there are
C  7 technology categories covered (4 thru 10) and IOPTN has been replaced by
C  IOPTN and ICUTS.
C
C
      INTEGER ALHFLG,ATPFLG
C
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /IMCR12/ CRED12(19,20,5,2,2)
      COMMON /IMCR4P/ CRED4P(19,2,7,3,3)
      COMMON /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
      COMMON /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME(20,9)
C
      INTEGER BY,IBY,AGE1ST,MYGIM(10,3)
C
```

```
C  ITECH = 4 does not occur for LDGT1/2 => repeat last year (1983) of previous
C  my group => value 4 will never be selected by technology search loop.
C
      DATA MYGIM/
C  ITECH: 1     2     3     4     5     6     7     8     9    10
C  LDGV
     * 1974, 1979, 1980, 1981, 1982, 1983, 1984, 1986, 1989, 2020,
C  LDGT1
     * 1974, 1980, 1983, 1983, 1984, 1985, 1986, 1987, 1989, 2020,
C  LDGT2
     * 1978, 1980, 1983, 1983, 1984, 1985, 1986, 1987, 1989, 2020/
C
C  Initialize PCLEFT to "no reduction" value = 1.0.
C
      PCLEFT = 1.0
C
C  If factor being calculated by BEF is not covered by I/M, then RETURN.
C
      IF(IMFLAG.EQ.1.OR.IP.EQ.3.OR.IV.GT.3.OR.
     *  (IV.GT.1.AND.ILDT.EQ.1).OR.
     *  (IV.EQ.3.AND.ILDT.EQ.2).OR.
     *  (IV.EQ.2.AND.ILDT.EQ.3).OR.
     *   ICY.EQ.MY.OR.ICY.LE.ICYIM.OR.
     *   MY.LT.MODYR1.OR.MY.GT.MODYR2) GOTO 99
C
C  Find the benefit year:
C
      BY=ICY-ICYIM
      IF(MY.GT.ICYIM) BY=ICY-MY
      IF(BY.GT.19) BY=19
C
C  Find the age of the vehicle at first inspection.
C
      AGE1ST=1
      IF(MY.LT.ICYIM) AGE1ST=ICYIM-MY+1
C
C  Determine technology by model year and vehicle type.  Note that because
C  MYGIM(10,IV) = 2020 for IV=1,2,3 = ICY upper bound (see PARSEC), a match in
C  the technology serch loop has to occur.  As with all the my index arrays in
C  MOBILE3, insure in any my changes that 2020 remains a my group upper bound.
C
      DO 10 ITECH=1,10
      IF(MY.LE.MYGIM(ITECH,IV)) GOTO 20
   10 CONTINUE
C
C  Technology 3 does not exist as a separate category in the credits arrays.
C  The percent reduction for technology 3 = that for technology 2.
C
   20 IF(ITECH.EQ.3) ITECH=2
C
C  Select correct I/M credits for TECH 1 & 2.
C  Interpolate between 10,20,30,40 & 30% stringency.
C
      IF(ITECH.GT.2) GOTO 40
C
      IREM=ISTRIN-(ISTRIN/10)*10
      REM=IREM*.1
      ISTRN=(ISTRIN-IREM)/10
```

```
C
C  Without mechanic training
C
      IF(IMTFLG.EQ.2) GOTO 30
      PCRED=CRED12(BY,AGE1ST,ISTRN,ITECH,IP)
      IF(ISTRN.LT.5.AND.IREM.GT.0) PCRED=
     *  (CRED12(BY,AGE1ST,ISTRN+1,ITECH,IP)-PCRED)*REM+PCRED
      GOTO 50
C
C  With mechanic training
C
   30 PCRED=CRED12(20-BY,21-AGE1ST,ISTRN,ITECH,IP)
      IF(ISTRN.LT.5.AND.IREM.GT.0) PCRED=
     *  (CRED12(20-BY,21-AGE1ST,ISTRN+1,ITECH,IP)-PCRED)*REM+PCRED
      GOTO 50
C
C  Select I/M credits for TECH 4-10 vehicles.
C
C  ITEST = 1 : idle test
C          2 : 2500 rpm idle test
C          3 : loaded test
C
C  ICUTS = 1 : 0.5% ICO / 100 ppm IHC
C          2 : 1.2% ICO / 220 ppm IHC
C          3 : 3.0% ICO / 300 ppm IHC
C
C
C  IP=1 (HC emissions)
C  IP=2 (CO emissions)
C
   40 IBY = BY + AGE1ST - 1
C
      PCRED=CRED4P(IBY,IP,ITECH-3,ICUTS,ITEST)
C
C  Set I/M benefit.
C
   50 PCLEFT = 1.0 - PCRED
C
   99 RETURN
      END
```

```
      FUNCTION BEFIDL(IG,IP,IV,IR,VMTAGE)
C
C  BEFIDL returns the basic idle emission factor adjusted by the methane
C  offset.
C
C  Called by EFCALX.
C
C  Input on call:
C
C    parameter list: IG,IP,IV,IR,VMTAGE
C    common blocks:
C    /FLAGS3/ NMHFLG
C    /IDLCMD/ DRIDL
C    /IDLCMZ/ ZMLIDL
C
C  Output on return:
C
C    function: BEFIDL
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  IDLMTH   R    methane offset to idle emission factor
C
C  Notes:
C
C  The methane adjustment was changed from a multiplicative to
C  a subtractive factor.
C
C
      REAL IDLMTH
      INTEGER PRTFLG
C
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IDLCMD/ DRIDL(20,3,8,2)
      COMMON /IDLCMZ/ ZMLIDL(20,3,8,2)
C
C  Determine idle methane offset.
C
      IDLMTH=0.0
      IF(IP.NE.1.OR.NMHFLG.EQ.1) GOTO 10
      IF(IV.GE.5.AND.IV.LE.7) GOTO 10
      IDLMTH=0.015
      IF(IR.EQ.2) IDLMTH=0.025
C
   10 BEFIDL=(ZMLIDL(IG,IP,IV,IR)+DRIDL(IG,IP,IV,IR)*VMTAGE)-IDLMTH
C
C  No inspection / maintenance adjustment.
C
      RETURN
      END
```

```
      FUNCTION IGEPTR(MY,IV,IR)
C
C IGEPTR selects the pointer to the fraction of vehicles equipped with A.C.
C
C Called by ALUH.
C
C Calls QUITER.
C
C Input on call:
C
C   parameter list: MY,IV,IR
C   common block: /ALUPAC/ MYGACE
C
C Output on return:
C
C   function: IGEPTR
C
C
      COMMON /ALUPAC/ MYGACE(8,3,2),MYGACC(2,3,2)
C
      DO 10 IG=1,8
      IF(MY.LE.MYGACE(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C Set default.
C
      IG=1
      CALL QUITER(0.,6,61,MY)
   20 IGEPTR=IG
C
      RETURN
      END
```

```
      FUNCTION IGUPTR(MY,IV,IR)
C
C  IGUPTR selects the pointer to the fraction of vehicles using A.C.
C
C  Called by ALUH.
C
C  Calls QUITER.
C
C  input on call:
C
C    parameter list: MY,IV,IR
C    common block: /ALUPAC/ MYGACC
C
C  Output on return:
C
C    function: IGUPTR
C
C
      COMMON /ALUPAC/ MYGACE(8,3,2),MYGACC(2,3,2)
C
      DO 10 IG=1,2
      IF(MY.LE.MYGACC(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(0.,7,61,MY)
   20 IGUPTR=IG
C
      RETURN
      END
```

```
      FUNCTION IGLPTR(MY,IV,IR)
C
C IGLPTR selects the pointer to the fraction of vehicles with extra load.
C
C Called by ALUH.
C
C Calls QUITER.
C
C Input on call:
C
C   parameter list: MY,IV,IR
C   common block: /ALUPLT/ MYGXLC
C
C Output on return:
C
C   function: IGLPTR
C
C
      COMMON /ALUPLT/ MYGXLC(6,3,2),MYGTWC(6,3,2)
C
      DO 10 IG=1,6
      IF(MY.LE.MYGXLC(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C Set default.
C
      IG=1
      CALL QUITER(0.,8,61,MY)
   20 IGLPTR=IG
C
      RETURN
      END
```

```
      FUNCTION IGTPTR(MY,IV,IR)
C
C  IGTPTR selects the pointer to the fraction of vehicles with trailer in tow.
C
C  Called by ALUH.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IV,IR
C    common block: /ALUPLT/ MYGTWC
C
C  Output on return:
C
C    function: IGTPTR
C
C
      COMMON /ALUPLT/ MYGXLC(6,3,2),MYGTWC(6,3,2)
C
      DO 10 IG=1,6
      IF(MY.LE.MYGTWC(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(0.,9,61,MY)
   20 IGTPTR=IG
C
      RETURN
      END
```

```
      FUNCTION IGPPTR(MY,IP,IR,IV)
C
C  IGPPTR selects the pointer to the speed correction factor coefficients in
C  GPBCOF for HDGV, LDDV, LDDT and HDDV and the normalized bag fractions
C  in GPACOF for all IV except HDGV & HDDV.
C
C  Called by BIGCFX.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IP,IR,IV
C    common block: /PTRCOM/ MAXIGP,MYGPBA
C
C  Output on return:
C
C    function: IGPPTR
C
C
      COMMON /PTRCOM/ MAXIGP,MYGPBA(13,3,2,8)
C
      DO 10 IG=1,MAXIGP
      IF(MY.LE.MYGPBA(IG,IP,IR,IV)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(0.,10,61,MY)
   20 IGPPTR=IG
C
      RETURN
      END
```

```
      FUNCTION IERPTR(MY,IP,IV,IR)
C
C  IERPTR selects the model year group pointer into the slope & intercept
C  arrays for the FTP and idle emission rate equations.
C
C  Called by EFCALX and NEWERQ.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IP,IV,IR
C    common block: /ERQCOM/ MYGERQ
C
C  Output on return:
C
C    function: IERPTR
C
C  Notes:
C
C  The do loop counter was changed from 15 to 20 and  the inverse scan counter
C  was changed from 16 to 21.
C
C  NEWERQ call for a new (unused) cell in IERPTR is keyed by MY = 0.
C
C
      COMMON /ERQCOM/ MYGERQ(20,2,3,8,2)
C
      DO 10 IG=1,20
      JG=IG
      IF(MY.GT.0) JG=21-IG
      IF(MY.GE.MYGERQ(JG,1,IP,IV,IR).AND.
     *   MY.LE.MYGERQ(JG,2,IP,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      JG=0
      IF(MY.EQ.0) GOTO 20
      JG=1
      CALL QUITER(0.,11,61,MY)
C
   20 IERPTR=JG
      RETURN
      END
```

```
      FUNCTION ISPPTR(MY,IR,IV)
C
C  ISPPTR selects the pointer to the bag speed normalization coefficients
C  in AIN & the scf's in SPBACK for LDGV, LDGT1 and LDGT2.
C
C  Called by BIGCFX.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IR,IV
C    common block: /ISPCOM/ MYGSPD
C
C  Output on return:
C
C    function: ISPPTR
C
C
      COMMON /ISPCOM/ MYGSPD(21,2,3),MYGSMC(21,2,3)
C
      DO 10 IG=1,21
      IF(MY.LE.MYGSPD(IG,IR,IV)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(0.,12,61,MY)
   20 ISPPTR=IG
C
      RETURN
      END
```

```
      FUNCTION ISPPT8(MY,IR,IP)
C
C  ISPPT8 selects the pointer to the bag speed normalization coefficients
C  in AIN for MC (IV=8).
C
C  Called by BIGCFX.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IR,IP
C    common block: /ISPCOM/ MYGSMC
C
C  Output on return:
C
C    function: ISPPT8
C
C
      COMMON /ISPCOM/ MYGSPD(21,2,3),MYGSMC(21,2,3)
C
      DO 10 IG=1,21
      IF(MY.LE.MYGSMC(IG,IR,IP)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(0.,13,61,MY)
   20 ISPPT8=IG
C
      RETURN
      END
```

```
      FUNCTION IEXMPT(MY,IV,IR)
C
C  IEXMPT selects the pointer to the non-methane fractions.
C
C  Called by EFCALX.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IV,IR
C    common block: /BEFGCM/ MYGEXM
C
C  Output on return:
C
C    function: IEXMPT
C
C  Notes:
C
C  Change to subtractive methane offset => increase IG loop check value to 5.
C
C
      COMMON /BEFGCM/ EXMETH(3,5,8,2),MYGEXM(5,8,2)
C
      DO 10 IG=1,5
      IF(MY.LE.MYGEXM(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(0.,14,61,MY)
   20 IEXMPT=IG
C
      RETURN
      END
```

```
      FUNCTION ITCPTR(MY,IP,IR,IV)
C
C  ITCPTR selects the pointer to the temperature correction coefficients.
C
C  Called by BIGCFX.
C
C  Calls QUITER.
C
C  Input on call:
C
C    parameter list: MY,IP,IR,IV
C    common block: /TCCOM2/ MAXTCF,MYGTCF
C
C  Output on return:
C
C    function: ITCPTR
C
C  Notes:
C
C  ITCPTR is a new subprogram (added for MOBILE3).
C
C
      COMMON /TCCOM2/ MAXTCF,MYGTCF(9,3,2,8)
C
      DO 10 IG=1,MAXTCF
      IF(MY.LE.MYGTCF(IG,IP,IR,IV)) GOTO 20
   10 CONTINUE
C
C  Set default.
C
      IG=1
      CALL QUITER(0.,15,61,MY)
   20 ITCPTR=IG
C
      RETURN
      END
```

```
      FUNCTION IGSFPT(MY,IV,IR)
C
C IGSFPT selects the pointer to the gross sales fractions.
C
C Called by EFCALX and REGMOD.
C
C Calls QUITER.
C
C Input on call:
C
C   parameter list: MY,IV,IR
C   common blocks:
C   /GSFCOM/ MAXGSF,MYGSF
C
C Output on return:
C
C   function: IGSFPT
C
C
      COMMON /GSFCOM/ MAXGSF,GSFRAC(22,8,2),MYGSF(22,8,2)
C
      DO 10 IG=1,MAXGSF
      IF(MY.LE.MYGSF(IG,IV,IR)) GOTO 20
   10 CONTINUE
C
C Set default for case where my exceeds highest year in MYGSF, given IV & IR.
C
      IG=1
      CALL QUITER(0.,16,61,MY)
   20 IGSFPT=IG
C
      RETURN
      END
```

```
      FUNCTION IGDPTR(ICASE)
C
C  IGDPTR returns the pointer to the model year group cell location holding
C  the desired data point, given MY.  ICASE identifies the calling CSECT
C  location and hence the array to be indexed and thus the my groups array
C  to search for the pointer.  Only tampering subroutines use this function.
C
C  Called by EFFGRP, EMIRAT and EVPEME.
C
C  Input on call:
C
C    parameter list: ICASE
C    common blocks:
C    /LOOKUP/ IVTAM,IQG,IHG
C    /MYCODE/ MY
C    /MYUBPT/ MYTGS,MYEGR,MYVTS,MYVEI
C
C  Output on return:
C
C    function: IGDPTR
C
C  Notes:
C
C  Differences from the other pointer functions:
C    (1) 4 different my group arrays are handled by this 1 subroutine, instead
C        of having a separate function for each case.
C    (2) IGDPTR assumes no default value, as the others do.  I.e. the typical
C        code:
C                C
C                C..Set default
C                C
C                      IG=1
C                      CALL QUITER(0.,6,61,MY)
C        is not inserted after each search loop.  All the my arrays have 2020,
C        the highest ICY allowed by subroutine input, as the last non-dummy
C        upper bound.  Hence, an in-range match has to occur.
C
C
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /MYUBPT/MYTGS(10,6,4),MYEGR(4,4),MYVTS(3,2,4),MYVEI(11,2,4)
C
C  Branch to array pointer loop being asked for by ICASE.
C
      GOTO(10,30,50,70),ICASE
C
C  Case 1: find MY's cell in TGS.
C
   10 DO 20 IG=1,10
      IF(MY.LE.MYTGS(IG,IQG,IVTAM)) GOTO 90
   20 CONTINUE
C
C  Case 2: find MY's cell in EMEGR.
C
   30 DO 40 IG=1,4
      IF(MY.LE.MYEGR(IG,IVTAM)) GOTO 90
   40 CONTINUE
C
```

```
C  Case 3: find MY's cell in EVPTGS.
C
 50  DO 60 IG=1,3
     IF(MY.LE.MYVTS(IG,IHG,IVTAM)) GOTO 90
 60  CONTINUE
C
C  Case 4: find MY's cell in EVPEMI.
C
 70  DO 80 IG=1,11
     IF(MY.LE.MYVEI(IG,IHG,IVTAM)) GOTO 90
 80  CONTINUE
C
C  Assign cell number.
C
 90 IGDPTR=IG
C
     RETURN
     END
```

```
      SUBROUTINE OUTPUT(ICY)
C
C  OUTPUT writes scenario results on unit IOUREP.
C
C  Called by MAIN.
C
C  Calls OUTDT1, OUTDT2, OUTDT3, OUTDT4, OUTHD1, OUTHD2, OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    parameter list: ICY
C    common blocks:
C    /FLAGS2/ NEWFLG
C    /FLAGS3/ IFORM
C    /NEWCOM/ NEWPAR,NEWFIT,NEWCT
C    /REGCOM/ IREJN
C    /RESULT/ EFFTP,WFTP,EFEVAP,EFIDLE,WIDLE
C    /SYSCOM/ INITPR
C
C  Output on return:
C
C    parameter list: WIDLE
C
C  Notes:
C
C  Subroutines OUTTAM & OUTATP were added, OUTHD1 & OUTDT1 deleted,
C  OUTHDO & OUTDTO renamed OUTHD1 & OUTDT1, respectively, the calls to
C  OUTTAM, OUTNEW, OUTIMP, OUTATP and OUTMTH put into the run header subs,
C  and all formats updated.
C
C
      INTEGER ALHFLG,ATPFLG,PRTFLG
C
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /NEWCOM/ NEWPAR(5,100),BERNEW(2,100),NEWFIT(100),NEWCT
      COMMON /REGCOM/ IREJN,ALT
      COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
C
      IF(NEWFLG.EQ.1) GOTO 20
C
C  Zero idle total for any IP with new (user supplied replacement) equation
C  for current IREJN.
C
      DO 10 IFAC=1,NEWCT
      IF(NEWFIT(IFAC).EQ.0) GOTO 10
      IR=NEWPAR(1,IFAC)
      IF(IR.NE.IREJN) GOTO 10
      IP=NEWPAR(3,IFAC)
      WIDLE(IP)=0.0
   10 CONTINUE
C
C  Select report format.
C
   20 GOTO(30,40,50,60),IFORM
C
C  IFORM=1
```

```
C
   30 IF(INITPR.EQ.1) CALL OUTHD1
      CALL OUTDT1(ICY)
      GOTO 99
C
C  IFORM=2
C
   40 IF(INITPR.EQ.1) CALL OUTHD2
      CALL OUTDT2(ICY)
      GOTO 99
C
C  IFORM=3
C
   50 IF(INITPR.EQ.1) CALL OUTHD3
      CALL OUTDT3(ICY)
      GOTO 99
C
C  IFORM=4
C
   60 IF(INITPR.EQ.1) CALL OUTHD4
      CALL OUTDT4(ICY)
C
   99 RETURN
      END
```

```
      SUBROUTINE OUTHD1
C
C  OUTHD1 writes the run header on unit IOUREP using output format (IFORM) 1.
C  The header consists of the run title and the scenario output table header.
C
C  Called by OUTPUT.
C
C  Calls OUTHDR.
C
C  Input on call:
C
C    common block: /IOUCOM/ IOUREP
C
C  Local array subscript:
C
C  NAMVEH(6)  -  NAMVEH ( IVM1 )
C
C  Local array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  NAMVEH   I    vehicle class names for output format 1
C
C
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
C
      DIMENSION NAMVEH(6)
C
      DATA NAMVEH/
     *   'LDV ',
     *   'LDT1',
     *   'LDT2',
     *   'HDG ',
     *   'HDD ',
     *   'MC '/
C
      CALL OUTHDR(IOUREP)
C
      WRITE(IOUREP,200) NAMVEH,NAMVEH
  200 FORMAT(
     *'O','R',41X,'P'/
     *' ','e',8X,'Speeds',5X,'Amb.',18X,'o',8X,
     *    'Composite Emission Factors',18X,'Vehicle Mix',16X,'C.E.F.'/
     *' ','g CY  LD   HD   MC  Tmp   Cold/Hot Start  1',
     *    6(3X,A4),
     *    6(2X,A4),'All Veh'/
     *' ','- -- ',14('-'),' ---  ',16('-'),
     *    ' - ',41('-'),
     *    1X,35('-'),1X,6('-'))
C
      RETURN
      END
```

```
      SUBROUTINE OUTHD2
C
C  OUTHD2 writes the run header on unit IOUREP using output format (IFORM) 2.
C  The header consists of the run title and the scenario output table header.
C
C  Called by OUTPUT.
C
C  Calls OUTHDR.
C
C  Input on call:
C
C    common blocks:
C    /IOUCOM/ IOUREP
C    /SYSCOM/ MAXVEH
C
C  Local array subscript:
C
C  NAMVEH(9)  -  NAMVEH ( IVF2 )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  MAXV     I    maximum number of vehicle class types for format 2 = 9
C  NAMVEH   R*8  names of vehicle class types for output format 2
C
C
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
C
      REAL*8 NAMVEH(9)
C
      DATA NAMVEH/
     *'LDGV    ','LDGT1   ','LDGT2   ','LDGT    ','HDGV    ',
     *'LDDV    ','LDDT    ','HDDV    ','MC      '/
C
      CALL OUTHDR(IOUREP)
C
      MAXV=MAXVEH+1
      WRITE(IOUREP,200) NAMVEH,(NAMVEH(IVF2),IVF2=1,3),
     *   (NAMVEH(IVF2),IVF2=5,MAXV)
  200 FORMAT(
     *'0','C R   *Code A*'/
     *' ','o e',44X,'Amb.'/
     *' ','d g CY',13X,'Vehicle Speeds',14X,'Tmp   Cold/Hot Start',
     *    '    Alt.'/
     *' ','- - -- ',39('-'),' ---  ',16('-'),1X,6('-')//
     *' ','C P   *Code B*'/
     *' ','o o',18X,'Composite Emission Factors'/
     *' ','d l',9(2X,A5)/
     *' ','- -  ',63('-')//
     *' ','C     *Code C*'/
     *' ','o',19X,'Vehicle Mix',19X,'C.E.F.'/
     *' ','d',8(1X,A5),'All Veh'/
     *' ','- ',47('-'),1X,6('-'))
C
      RETURN
      END
```

```
      SUBROUTINE OUTHD3
C
C  OUTHD3 writes the run header on unit IOUREP using output format (IFORM) 3.
C  The header consists of the run title and a partial echo of user selected
C  options and data.
C
C  Called by OUTPUT.
C
C  Calls OUTATP, OUTHDR, OUTIMP, OUTMTH, OUTNEW, OUTTAM and USDPTR.
C
C  Input on call:
C
C    common blocks:
C    /FLAGS1/ TAMFLG
C    /FLAGS2/ NEWFLG,IMFLAG,ATPFLG
C    /IOUCOM/ IOUREP
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG,ALHFLG,ATPFLG
C
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
C
      CALL OUTHDR(IOUREP)
C
      IF(TAMFLG.EQ.2) CALL OUTTAM
C
      IF(NEWFLG.EQ.2) CALL OUTNEW
C
      IF(IMFLAG.EQ.2) CALL OUTIMP
C
      IF(ATPFLG.EQ.2) CALL OUTATP
C
      CALL OUTMTH
C
      WRITE(IOUREP,200)
  200 FORMAT('0',112('_'))
C
      CALL USDPTR
C
      RETURN
      END
```

```
      SUBROUTINE OUTHD4
C
C  OUTHD4 writes the run header on unit IOUREP using output format (IFORM) 4.
C  The header consists of the run title and a partial echo of user selected
C  options and data.
C
C  Called by OUTPUT.
C
C  Calls OUTATP, OUTHDR, OUTIMP, OUTMTH, OUTNEW, OUTTAM and USDPTR.
C
C  Input on call:
C
C    common blocks:
C    /FLAGS1/ TAMFLG
C    /FLAGS2/ NEWFLG,IMFLAG,ATPFLG
C    /IOUCOM/ IOUREP
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG,ALHFLG,ATPFLG
C
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
C
      CALL OUTHDR(IOUREP)
C
      IF(TAMFLG.EQ.2) CALL OUTTAM
C
      IF(NEWFLG.EQ.2) CALL OUTNEW
C
      IF(IMFLAG.EQ.2) CALL OUTIMP
C
      IF(ATPFLG.EQ.2) CALL OUTATP
C
      CALL OUTMTH
C
      WRITE(IOUREP,200)
  200 FORMAT('0',80('_'))
C
      CALL USDPTR
C
      RETURN
      END
```

```
      SUBROUTINE OUTHDR(IOUOUT)
C
C  OUTHDR writes the run title on unit IOUOUT.
C
C  Called by CONSEC, OUTHD1, OUTHD2, OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    parameter list: IOUOUT
C    common block: /PROJCM/ PROJID
C
C  Output on return:
C
C    common block: /SYSCOM/ INITPR
C
C
      COMMON /PROJCM/ PROJID(20)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
C
      INITPR=0
C
      WRITE(IOUOUT,200) PROJID
  200 FORMAT('1',20A4)
C
      RETURN
      END
```

```
      SUBROUTINE OUTTAM
C
C  OUTTAM prints the user supplied replacement tampering rates.
C
C  Called by OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    common blocks:
C    /BASETR/ ZMLTAM,DRTAM
C    /FLAGS2/ IMFLAG
C    /FLAGS3/ IFORM
C    /IOUCOM/ IOUREP
C
C  Local array subscripts:
C
C  DISABL(2,7)  -  DISABL ( ICH , ID )
C  IMTYPE(3,2)  -  IMTYPE ( ITY , IM )
C  USC(4)       -  USC ( ISC )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  ADET     R    column heading for deterioration rates
C  AZML     R    column heading for zero mile levels
C  DISABL   R*8  names of disablement categories
C  IMTYPE   I    non-I/M and I/M tampering rates table headings
C  USC      I    underscore strings for table and column headings
C
C  Notes:
C
C  OUTTAM is a new subprogram (added for MOBILE3).
C
C
      INTEGER ALHFLG,ATPFLG,PRTFLG
      INTEGER IMTYPE(3,2),USC(4)
      REAL*8 DISABL(2,7)
C
      COMMON /BASETR/ BTR(7,2),ZMLTAM(7,2,4),DRTAM(7,2,4)
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
C
      DATA IMTYPE/'Non-','I/M ','Case','  I/','M Ca','se  '/
      DATA AZML/'ZML '/,ADET/'DET '/
      DATA USC/'_   ','__  ','___ ','____'/
      DATA DISABL/'Air Pump','        ',
     *            'Catalyst','        ',
     *            'Fuel Inl','et      ',
     *            'Other Mi','sfueling',
     *            'EGR Syst','em      ',
     *            'Evap Can','ister   ',
     *            'PCV Syst','em      '/
C
      WRITE(IOUREP,200)
  200 FORMAT('0',
     *'Replacement Tampering and Misfueling Rates Input by User:')
```

```
C
      DO 10 IM=1,IMFLAG
C
      IF(IFORM.EQ.4) WRITE(IOUREP,210)
     *  (IMTYPE(ITY,IM),ITY=1,3),
     *  (USC(4),ISC=1,5),USC(1),USC(4),USC(1),USC(4),
     *  (AZML,ADET,ITER=1,4),
     *  (USC(4),ISC=1,4),USC(2),(USC(4),USC(4),USC(3),ISC=1,4),
     *((DISABL(ICH,ID),ICH=1,2),(ZMLTAM(ID,IM,IVTAM),DRTAM(ID,IM,IVTAM),
     *                                                IVTAM=1,4),ID=1,7)
C
  210 FORMAT('0',T45,3A4/'+',T45,3A4/
     *  '0',T26,'LDGV',T41,'LDGT1',T56,'LDGT2',T71,'HDGV'/
     *  '+',T26,A4,T41,2A4,T56,2A4,T71,A4/
     *  '0',T6,'Component',T19,'|',4(3X,A4,4X,A4)/
     *  '+',T2,5A4,4(A4,'__ ',2A4)/
     *  (' ',2A8,T19,'|',T21,4(F7.4,F8.5)))
C
      IF(IFORM.EQ.3) WRITE(IOUREP,220)
     *  (IMTYPE(ITY,IM),ITY=1,3),
     *  (USC(4),ISC=1,5),USC(1),USC(4),USC(1),USC(4),
     *  (AZML,ADET,ITER=1,4),
     *  (USC(4),ISC=1,4),USC(2),(USC(4),USC(2),USC(4),USC(3),ISC=1,4),
     *((DISABL(ICH,ID),ICH=1,2),(ZMLTAM(ID,IM,IVTAM),DRTAM(ID,IM,IVTAM),
     *                                                IVTAM=1,4),ID=1,7)
C
  220 FORMAT('0',T54,3A4/'+',T54,3A4/
     *  '0',T29,'LDGV',T48,'LDGT1',T67,'LDGT2',T86,'HDGV'/
     *  '+',T29,A4,T48,2A4,T67,2A4,T86,A4/
     *  '0',T6,'Component',T19,'|',4(5X,A4,6X,A4)/
     *  '+',T2,5A4,4(2X,2A4,' ',2A4)/
     *  (' ',2A8,T19,'|',T21,4(2X,F7.4,2X,F8.5)))
C
   10 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE OUTNEW
C
C  OUTNEW writes out the new (user supplied replacement) basic emission
C  rate parameters and data.
C
C  Called by OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    common blocks:
C    /IOUCOM/ IOUREP
C    /NEWCOM/ NEWPAR,BERNEW,NEWFIT,NEWCT
C    /STRING/ NOYES
C
C
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /NEWCOM/ NEWPAR(5,100),BERNEW(2,100),NEWFIT(100),NEWCT
      COMMON /STRING/ NOYES(2),COMMA,PERIOD
C
C
      WRITE(IOUREP,200)
  200 FORMAT(
     *'0',T16,'Emission Factor Modification Profile'/
     *'+',T16,'____________________________________'/
     *'0','Region  Veh.  Pollutant  First MY  Last MY    Base     ',
     *    'DR   Altered'/
     *'+','______  ____  _________  _______  _______    ____    _',
     *    '___  _______')
C
      DO 10 IFAC=1,NEWCT
      INO=1
      IF(NEWFIT(IFAC).EQ.1) INO=2
      WRITE(IOUREP,210)
     *    (NEWPAR(I,IFAC),I=1,5),(BERNEW(I,IFAC),I=1,2),NOYES(INO)
  210 FORMAT(' ',2X,I1,7X,I1,8X,I1,2X,2(5X,I4),2X,2(2X,F6.2),4X,A4)
   10 CONTINUE
C
      RETURN
      END
```

```
      SUBROUTINE OUTIMP
C
C  OUTIMP prints the I/M program parameters and the alternate I/M credits
C  set name, if it was entered.
C
C  Called by OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    common blocks:
C    /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
C    /IMPAR2/ ILDT,ITEST,ICUTS,NLIM,IMNAME
C    /IOUCOM/ IOUREP
C    /STRING/ NOYES,COMMA
C
C  Local array subscripts:
C
C  CUTCO(3)    -  CUTCO ( ICUTS )
C  CUTHC(3)    -  CUTHC ( ICUTS )
C  TTYPE(4,3)  -  TTYPE ( ICH, ITEST )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  CUTCO    R    labels for testing cuts for CO, in percents
C  CUTHC    R    labels for testing cuts for HC, in ppm IHC
C  ICO      I    ICO label
C  LDGT     I    LDGT label
C  LDGV     I    LDGV label
C  ONE      R    number 1 as character
C  PPMIHC   R*8  ppm IHC label
C  SLASH    R    character '/'
C  TTYPE    R    test type description
C  TWO      R    number 2 as character
C
C  Notes:
C
C  Output formats were updated to reflect new I/M methodology, including
C  replacing IOPTN with ITEST and ICUTS.
C
C
      COMMON /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
      COMMON /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME(20,9)
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /STRING/ NOYES(2),COMMA,PERIOD
C
      DIMENSION TTYPE(4,3),CUTCO(3),CUTHC(3)
      REAL*8 PPMIHC
C
      DATA LDGV,LDGT,ONE,TWO/'LDGV','LDGT','1   ','2   '/
      DATA TTYPE/'Idle','    ','    ','    ',
     2           '2500',' rpm',' / I','dle ',
     3           'Load','ed /',' Idl','e   '/
      DATA CUTCO/'0.5%','1.2%','3.0%'/,ICO/' ICO'/
      DATA SLASH/' /  '/
      DATA CUTHC/' 100',' 220',' 300'/,PPMIHC/' ppm IHC'/
C
```

```
      WRITE(IOUREP,200) ICYIM,ISTRIN,NOYES(IMTFLG),MODYR1,MODYR2
  200 FORMAT('0','I/M program selected:'/
     *       '0','    Start year (January 1):          ',I4/
     *       ' ','    Pre-1981 MYR stringency rate:    ',I2,'%'/
     *       ' ','    Mechanic training program?:      ',A4/
     *       ' ','    First model year covered:        ',I4/
     *       ' ','    Last model year covered:         ',I4)
C
      IF(ILDT.EQ.1)WRITE(IOUREP,210) LDGV
      IF(ILDT.EQ.2)WRITE(IOUREP,210) LDGV,COMMA,LDGT,ONE
      IF(ILDT.EQ.3)WRITE(IOUREP,210) LDGV,COMMA,LDGT,TWO
      IF(ILDT.EQ.4)WRITE(IOUREP,210) LDGV,COMMA,LDGT,ONE,COMMA,LDGT,TWO
  210 FORMAT(' ','    Vehicle types covered:           ',
     *           A4,A2,A4,A1,A2,A4,A1)
C
      WRITE(IOUREP,220) (TTYPE(ICH,ITEST),ICH=1,4),
     *                  CUTCO(ICUTS),ICO,SLASH,CUTHC(ICUTS),PPMIHC
  220 FORMAT(' ','    1981 & later MYR test type:      ',4A4/
     *       ' ','    1981 & later MYR test cutpoints: ',2A4,A2,A4,A8)
C
      IF(NLIM.EQ.0) GOTO 99
      WRITE(IOUREP,230)
  230 FORMAT(' ')
      DO 10 LINES=1,NLIM
      WRITE(IOUREP,240) (IMNAME(N,LINES),N=1,20)
  240 FORMAT(' ',20A4)
   10 CONTINUE
C
   99 RETURN
      END
```

```
      SUBROUTINE OUTATP
C
C  OUTATP prints the ATP program parameters and the ATP effectiveness rates
C  set name, if it was entered.
C
C  Called by OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    common blocks:
C    /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG,NLAT,ATNAME
C    /IOUCOM/ IOUREP
C    /STRING/ COMMA
C
C  Local array subscripts:
C
C  IVPTR(4)  -  IVPTR ( NCOVER )
C  VNAME(4)  -  VNAME ( NCOVER )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  IVPTR    I    pointer vector into VNAME
C  NCOMMA   I    number of '<vehicle class name>,' substrings to be written
C  NCOVER   I    number of vehicle classes covered by the A-T program
C  VNAME    R*8  A-T program vehicle class names
C
C  Notes:
C
C  OUTATP is a new subprogram (added for MOBILE3).
C
C
      REAL*8 VNAME(4)
      DIMENSION IVPTR(4)
C
      COMMON /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG(4),NLAT,ATNAME(20,9)
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /STRING/ NOYES(2),COMMA,PERIOD
C
      DATA VNAME/'LDGV    ','LDGT1   ','LDGT2   ','HDGV    '/
C
      WRITE(IOUREP,200)LAPSY,LAP1ST,LAPLST
  200 FORMAT('0','Anti-tampering program selected:'/
     *       '0','    Start year (January 1):   ',I4/
     *       ' ','    First model year covered: ',I4/
     *       ' ','    Last model year covered:  ',I4)
C
      NCOVER=0
      DO 10 IVTAM=1,4
      IF(LVTFLG(IVTAM).EQ.1) GOTO 10
      NCOVER=NCOVER+1
      IVPTR(NCOVER)=IVTAM
   10 CONTINUE
C
      IF(NCOVER.EQ.1) WRITE(IOUREP,210)VNAME(IVPTR(1))
      NCOMMA=NCOVER-1
      IF(NCOVER.GT.1)
```

```
     *  WRITE(IOUREP,210) (VNAME(IVPTR(I2ND)),COMMA,I2ND=1,NCOMMA),
     *                    VNAME(IVPTR(NCOVER))
  210 FORMAT(' ','    Vehicle types covered:    ',3(A5,A2),A5)
C
      IF(NLAT.EQ.0) GOTO 99
      WRITE(IOUREP,230)
  230 FORMAT(' ')
      DO 20 LINES=1,NLAT
      WRITE(IOUREP,240) (ATNAME(ICH,LINES),ICH=1,20)
  240 FORMAT(' ',20A4)
   20 CONTINUE
C
   99 RETURN
      END
```

```
      SUBROUTINE OUTMTH
C
C  OUTMTH writes evaporative HC message on unit IOUREP.
C
C  Called by OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    common blocks:
C    /FLAGS3/ NMHFLG
C    /IOUCOM/ IOUREP
C
C  Local array subscripts:
C
C  NONMTH(3)  -  NONMTH ( ICH )
C  REMARK(15) -  REMARK ( ICH )
C  TOTAL(2)   -  TOTAL ( ICH )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  NONMTH   I    character string 'Non-methane '
C  REMARK   R    character string comment that HC ef's include evap ef's
C  TOTAL    R    character string 'Total   '
C
C
      INTEGER PRTFLG
C
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
C
      DIMENSION TOTAL(2),NONMTH(3),REMARK(15)
C
      DATA TOTAL/'Tota','l   '/
C
      DATA NONMTH/'Non-','meth','ane '/
C
      DATA REMARK/
     *'HC e','miss','ion ','fact','ors ','incl','ude ',
     *'evap','orat','ive ','HC e','miss','ion ','fact','ors.'/
C
      IF(NMHFLG.EQ.1) WRITE(IOUREP,200)TOTAL,REMARK
  200 FORMAT('0',A4,A2,15A4)
C
      IF(NMHFLG.EQ.2) WRITE(IOUREP,210)NONMTH,REMARK
  210 FORMAT('0',3A4,15A4)
C
      RETURN
      END
```

```
      SUBROUTINE USDPTR
C
C  USDPTR finds the pointers into the user supplied data name array.
C
C  Called by OUTHD3 and OUTHD4.
C
C  Input on call:
C
C    common blocks:
C    /FLAGS1/ TAMFLG
C    /FLAGS2/ MYMRFG,NEWFLG
C
C  Output on return:
C
C    common block: /USDATA/ NUSD,IUSD
C
C  Notes:
C
C  USDPTR is a new subprogram (added for MOBILE3).
C
C
      INTEGER TAMFLG,SPDFLG,VMFLAG,ALHFLG,ATPFLG
      REAL*8 USNAME
C
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /USDATA/ USNAME(4,4),NUSD,IUSD(4)
C
C  Setup scenario header user supplied data pointer vector.
C
      IF(TAMFLG.EQ.1.AND.NEWFLG.EQ.1.AND.MYMRFG.EQ.1) GOTO 99
      IF(TAMFLG.EQ.1) GOTO 10
      NUSD=1
      IUSD(1)=1
   10 IF(NEWFLG.EQ.1) GOTO 20
      NUSD=NUSD+1
      IUSD(NUSD)=2
   20 IF(MYMRFG.EQ.1) GOTO 99
      IF(MYMRFG.EQ.4) GOTO 30
      NUSD=NUSD+1
      IF(MYMRFG.EQ.2) IUSD(NUSD)=3
      IF(MYMRFG.EQ.3) IUSD(NUSD)=4
      GOTO 99
   30 NUSD=NUSD+1
      IUSD(NUSD)=3
      NUSD=NUSD+1
      IUSD(NUSD)=4
C
   99 RETURN
      END
```

```
      SUBROUTINE OUTDT1(ICY)
C
C  OUTDT1 writes scenario parameters and output on unit IOUREP using output
C  format (IFORM) 1.
C
C  Called by OUTPUT.
C
C  Calls OUTPOL and IFIX (FORTRAN library function).
C
C  Input on call:
C
C    parameter list: ICY
C    common blocks:
C    /FLAGS3/ ICEVFG
C    /IOUCOM/ IOUREP
C    /LNKCOM/ SPD,AMBT,PCCN,PCHC,PCCC
C    /REGCOM/ IREJN
C    /RESULT/ EFFTP,WFTP,EFEVAP,EFIDLE,WIDLE
C    /SYSCOM/ MAXVEH
C    /VMXCOM/ VMTMIX
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  IAMBT    R    AMBT converted to INTEGER type
C  ICY2     I    ICY converted back to 2 digit year
C  IP1      I    see parameter dictionary
C  IP2      I    see parameter dictionary
C
C  Notes:
C
C  OUTDT1 in MOBILE3 is an update of OUTDTO in MOBILE2 (the old MOBILE1
C  descriptive format, IFORM = 1 in MOBILE2, has been eliminated).
C
C
      INTEGER PRTFLG
C
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /REGCOM/ IREJN,ALT
      COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /VMXCOM/ VMTMIX(8)
C
      CALL OUTPOL(IP1,IP2)
      IAMBT=IFIX(AMBT)
      ICY2=ICY-((ICY/100)*100)
C
      IF((ICEVFG.EQ.2.OR.ICEVFG.EQ.4).AND.IP1.EQ.1) WRITE(IOUREP,200)
     *   IREJN,ICY2,SPD(1),SPD(4),SPD(8),IAMBT,PCCN,PCHC,PCCC,
     *      (EFEVAP(IV),IV=1,4),(EFEVAP(IV),IV=7,MAXVEH),
     *   (VMTMIX(IV),IV=1,4),(VMTMIX(IV),IV=7,MAXVEH)
  200 FORMAT(
     *' ',I1,1X,I2,1X,2(F4.1,'/'),F4.1,I4,3F6.1,1X,'E',6F7.2,6F6.3)
C
      DO 10 IP=IP1,IP2
```

```
66058          WRITE(IOUREP,210)
66059         *   IREJN,ICY2,SPD(1),SPD(4),SPD(8),IAMBT,PCCN,PCHC,PCCC,
66060         *   IP,(EFFTP(IP,IV),IV=1,4),(EFFTP(IP,IV),IV=7,MAXVEH),
66061         *   (VMTMIX(IV),IV=1,4),(VMTMIX(IV),IV=7,MAXVEH),WFTP(IP)
66062       10 CONTINUE
66063      210 FORMAT(
66064         *' ',I1,1X,I2,1X,2(F4.1,'/'),F4.1,I4,3F6.1,1X,I1,6F7.2,6F6.3,F7.2)
66065    C
66066          RETURN
66067          END
```

```
      SUBROUTINE OUTDT2(ICY)
C
C  OUTDT2 writes scenario parameters and output on unit IOUREP using output
C  format (IFORM) 2.
C
C  Called by OUTPUT.
C
C  Calls OUTPOL and IFIX (FORTRAN library function).
C
C  Input on call:
C
C    parameter list: ICY
C    common blocks:
C    /FLAGS3/ ICEVFG
C    /IOUCOM/ IOUREP
C    /LNKCOM/ SPD,AMBT,PCCN,PCHC,PCCC
C    /REGCOM/ IREJN,ALT
C    /RESULT/ EFFTP,WFTP,EFEVAP,EFIDLE,WIDLE
C    /SYSCOM/ MAXVEH
C    /VMXCOM/ VMTMIX
C
C  Local variable dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  IAMBT    R    AMBT converted to INTEGER type
C  ICY2     I    ICY converted back to 2 digit year
C  IP1      I    see parameter dictionary
C  IP2      I    see parameter dictionary
C
C
      INTEGER PRTFLG
C
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /REGCOM/ IREJN,ALT
      COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /VMXCOM/ VMTMIX(8)
C
      CALL OUTPOL(IP1,IP2)
      IAMBT=IFIX(AMBT)
      ICY2=ICY-((ICY/100)*100)
C
      IF((ICEVFG.EQ.2.OR.ICEVFG.EQ.4).AND.IP1.EQ.1) WRITE(IOUREP,200)
     *   IREJN,ICY2,SPD,IAMBT,PCCN,PCHC,PCCC,ALT,
     *   (EFEVAP(IV),IV=1,3),EFEVAP(9),(EFEVAP(IV),IV=4,MAXVEH),
     *   VMTMIX
  200 FORMAT(
     *' ','A',1X,I1,1X,I2,1X,7(F4.1,'/'),F4.1,I4,3F6.1,1X,F6.0/
     *' ','B',1X,'E',9F7.2/
     *' ','C',8F6.3)
C
      DO 10 IP=IP1,IP2
      WRITE(IOUREP,210)
     *   IREJN,ICY2,SPD,IAMBT,PCCN,PCHC,PCCC,ALT,
     *   IP,(EFFTP(IP,IV),IV=1,3),EFFTP(IP,9),(EFFTP(IP,IV),IV=4,
```

```
     *      MAXVEH),
     *   VMTMIX,WFTP(IP)
   10 CONTINUE
C
  210 FORMAT(
     *' ','A',1X,I1,1X,I2,1X,7(F4.1,'/'),F4.1,I4,3F6.1,1X,F6.0/
     *' ','B',1X,I1,9F7.2/
     *' ','C',8F6.3,F7.2)
C
      RETURN
      END
```

```
      SUBROUTINE OUTDT3(ICY)
C
C  OUTDT3 writes scenario parameters and output on unit IOUREP using output
C  format (IFORM) 3.
C
C  Called by OUTPUT.
C
C  Calls OUTPOL.
C
C  Input on call:
C
C    parameter list: ICY
C    common blocks:
C    /FLAGS2/ IMFLAG,ALHFLG,ATPFLG
C    /FLAGS3/ ICEVFG,IDLFLG,NMHFLG
C    /IOUCOM/ IOUREP
C    /LNKCOM/ SPD,AMBT,PCCN,PCHC,PCCC
C    /REGCOM/ IREJN,ALT
C    /RESULT/ EFFTP,WFTP,EFEVAP,EFIDLE,WIDLE
C    /STRING/ NOYES,COMMA,PERIOD
C    /SYSCOM/ MAXVEH
C    /USDATA/ USNAME,NUSD,IUSD
C    /VMXCOM/ VMTMIX
C    /XCFS1/  AC,XLOAD,TRAILR,ABSHUM,DB,WB
C
C  Local array subscripts:
C
C  NAMNMH(2)  -  NAMNMH ( NMHFLG )
C  NAMPOL(3)  -  NAMNMH ( IP )
C  NAMREG(3)  -  NAMREG ( IREJN )
C  NAMVEH(10) -  NAMVEH ( IVF3 )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------------------
C  IP1      I    see parameter dictionary
C  IP2      I    see parameter dictionary
C  NAMNMH   R*8  prefix indicating type of HC (total vs non-methane)
C  NAMPOL   I    pollutant names
C  NAMREG   I    region names
C  NAMVEH   R*8  vehicle class names
C  NWITHC   I    number of substrings to be written with a comma appended
C  USC8     R*8  8 character underscore
C
C
      INTEGER ALHFLG,ATPFLG,PRTFLG
      REAL*8 USNAME
C
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /REGCOM/ IREJN,ALT
      COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
      COMMON /STRING/ NOYES(2),COMMA,PERIOD
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /USDATA/ USNAME(4,4),NUSD,IUSD(4)
```

```
      COMMON /VMXCOM/ VMTMIX(8)
      COMMON /XCFS1/  AC,XLOAD(3),TRAILR(3),ABSHUM,DB,WB
C
      REAL*8 NAMVEH(10),NAMNMH(2),USC8
C
      DIMENSION NAMREG(3),NAMPOL(3)
C
      DATA NAMVEH/
     *   '    LDGV',
     *   '   LDGT1',
     *   '   LDGT2',
     *   '    LDGT',
     *   '    HDGV',
     *   '    LDDV',
     *   '    LDDT',
     *   '    HDDV',
     *   '    MC  ',
     *   ' All Veh'/
C
      DATA NAMREG/'Low ','High','Mid '/
C
      DATA USC8/'  ______'/
C
      DATA NAMPOL/' HC:',' CO:','NOX:'/
C
      DATA NAMNMH/'   Total','Non-Meth'/
C
      CALL OUTPOL(IP1,IP2)
C
      IF(NUSD.EQ.0) GOTO 10
      IF(NUSD.EQ.1) WRITE(IOUREP,200) (USNAME(ICH,IUSD(1)),ICH=1,4),
     *                                PERIOD
      NWITHC=NUSD-1
      IF(NWITHC.GT.0) WRITE(IOUREP,200)
     *  ((USNAME(ICH,IUSD(ICT)),ICH=1,4),COMMA,ICT=1,NWITHC),
     *  (USNAME(ICH,IUSD(NUSD)),ICH=1,4),PERIOD
  200 FORMAT('0','User supplied',4A8,T46,A1,4A8,T78,A1,4A8,T110,A1/
     *       ' ',T15,4A8,T46,A1)
C
   10 WRITE(IOUREP,210)
     *   ICY,NOYES(IMFLAG),AMBT,NAMREG(IREJN),
     *       NOYES(ATPFLG),PCCN,PCHC,PCCC,ALT
  210 FORMAT(
     *'0', T2,'Cal. Year:',I5,
     *    T25,'I/M Program: ',A4,
     *    T48,'Ambient Temp:',F5.1,' (F)',
     *    T85,'Region: ',A4/
     *' ',T19,'Anti-tam. Program: ',A4,
     *    T46,'Operating Mode:',F5.1,2(' /',F5.1),
     *    T83,'Altitude:',F6.0,' Ft.')
C
      IF(ALHFLG.GT.1) WRITE(IOUREP,215)
     *   ABSHUM,
     *   AC,DB,WB
  215 FORMAT(
     *' ',T19,'Absolute Humidity:',F6.2,
     *    T48,'AC (DB / WB):',F5.1,' (',F5.1,' /',F5.1,')')
C
```

```
      WRITE(IOUREP,220)
     *   NAMVEH,(USC8,ITER=1,10),
     *   SPD,
     *   VMTMIX
  220 FORMAT(
     *'0','  Veh. Type:',10(2X,A8)/'+',T15,9(2X,A8),1X,A8/
     *' ','Veh. Speeds:',F9.1,2F10.1,10X,5F10.1/
     *' ','    VMT Mix:',F11.3,2F10.3,10X,5F10.3)
C
      IF(ALHFLG.GT.1) WRITE(IOUREP,230)
     *   XLOAD,
     *   TRAILR
  230 FORMAT(
     *' ',' Extra Load:',F11.3,2F10.3/
     *' ','Trlr in Tow:',F11.3,2F10.3)
C
      WRITE(IOUREP,240)
  240 FORMAT(
     *'0','Composite Emission Factors (Gm/Mile)')
C
      DO 30 IP=IP1,IP2
      IF(IP.NE.1) GOTO 20
C
      WRITE(IOUREP,250)
     *  NAMNMH(NMHFLG),NAMPOL(IP),
     *  (EFFTP(IP,IV),IV=1,3),EFFTP(IP,9),(EFFTP(IP,IV),IV=4,MAXVEH),
     *  WFTP(IP)
  250 FORMAT(
     *' ',A8,A4,
     *   9F10.2,
     *    F10.2)
      IF(ICEVFG.EQ.2.OR.ICEVFG.EQ.4) WRITE(IOUREP,260)
     *   NAMPOL(IP),
     *   (EFEVAP(IV),IV=1,3),EFEVAP(9),(EFEVAP(IV),IV=4,MAXVEH)
  260 FORMAT(
     *' ','   *Evap',A4,
     *    9F10.2,6X,'----')
      GOTO 30
C
   20 WRITE(IOUREP,265)
     *  NAMPOL(IP),
     *  (EFFTP(IP,IV),IV=1,3),EFFTP(IP,9),(EFFTP(IP,IV),IV=4,MAXVEH),
     *  WFTP(IP)
  265 FORMAT(
     *' ','Exhaust ',A4,
     *    9F10.2,
     *    F10.2)
   30 CONTINUE
C
      IF(IDLFLG.EQ.1) GOTO 60
      WRITE(IOUREP,270)
  270 FORMAT(
     *'0','Hot Stabilized Idle Emission Factors (Gm/Min)')
C
      DO 50 IP=IP1,IP2
      IF(IP.NE.1.OR.NMHFLG.EQ.1) GOTO 40
C
      WRITE(IOUREP,275)
```

```
68174          *  NAMPOL(IP),
68175          *  (EFIDLE(IP,IV),IV=1,3),EFIDLE(IP,9),(EFIDLE(IP,IV),IV=4,MAXVEH),
68176          *  WIDLE(IP)
68177      275 FORMAT(
68178          *' ','NM-Idle ',A4,
68179          *    9F10.2,
68180          *    F10.2)
68181           GOTO 50
68182    C
68183       40 WRITE(IOUREP,280)
68184          *  NAMPOL(IP),
68185          *  (EFIDLE(IP,IV),IV=1,3),EFIDLE(IP,9),(EFIDLE(IP,IV),IV=4,MAXVEH),
68186          *  WIDLE(IP)
68187      280 FORMAT(
68188          *' ','   Idle ',A4,
68189          *    9F10.2,
68190          *     F10.2)
68191       50 CONTINUE
68192    C
68193       60 WRITE(IOUREP,290)
68194      290 FORMAT(' ',112('_'))
68195    C
68196           RETURN
68197           END
```

```
      SUBROUTINE OUTDT4(ICY)
C
C  OUTDT4 writes scenario parameters and output on unit IOUREP using output
C  format (IFORM) 4.
C
C  Called by OUTPUT.
C
C  Calls OUTPOL.
C
C  Input on call:
C
C    parameter list: ICY
C    common blocks:
C    /FLAGS2/ IMFLAG,ALHFLG,ATPFLG
C    /FLAGS3/ ICEVFG,IDLFLG,NMHFLG
C    /IOUCOM/ IOUREP
C    /LNKCOM/ SPD,AMBT,PCCN,PCHC,PCCC
C    /REGCOM/ IREJN,ALT
C    /RESULT/ EFFTP,WFTP,EFEVAP,EFIDLE,WIDLE
C    /STRING/ NOYES,COMMA,PERIOD
C    /SYSCOM/ MAXVEH
C    /USDATA/ USNAME,NUSD,IUSD
C    /VMXCOM/ VMTMIX
C    /XCFS1/  AC,XLOAD,TRAILR,ABSHUM,DB,WB
C
C  Local array subscripts:
C
C  NAMNMH(2)  -  NAMNMH ( NMHFLG )
C  NAMPOL(3)  -  NAMNMH ( IP )
C  NAMREG(3)  -  NAMREG ( IREJN )
C  NAMVEH(10) -  NAMVEH ( IVF3 )
C
C  Local variable / array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  IP1      I    see parameter dictionary
C  IP2      I    see parameter dictionary
C  NAMNMH   R*8  prefix indicating type of HC (total vs non-methane)
C  NAMPOL   I    pollutant names
C  NAMREG   I    region names
C  NAMVEH   R*8  vehicle class names
C  NWITHC   I    number of substrings to be written with a comma appended
C  USC8     R*8  8 character underscore
C
C
      INTEGER ALHFLG,ATPFLG,PRTFLG
      REAL*8 USNAME
C
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /REGCOM/ IREJN,ALT
      COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
      COMMON /STRING/ NOYES(2),COMMA,PERIOD
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /USDATA/ USNAME(4,4),NUSD,IUSD(4)
```

```
      COMMON /VMXCOM/ VMTMIX(8)
      COMMON /XCFS1/  AC,XLOAD(3),TRAILR(3),ABSHUM,DB,WB
C
      REAL*8 NAMVEH(10),NAMNMH(2),USC8
C
      DIMENSION NAMREG(3),NAMPOL(3)
C
      DATA NAMVEH/
     *   '  LDGV  ',
     *   ' LDGT1  ',
     *   ' LDGT2  ',
     *   '  LDGT  ',
     *   '  HDGV  ',
     *   '  LDDV  ',
     *   '  LDDT  ',
     *   '  HDDV  ',
     *   '  MC    ',
     *   'All Veh '/
C
      DATA USC8/' ______ '/
C
      DATA NAMREG/'Low ','High','Mid '/
C
      DATA NAMPOL/' HC:',' CO:','NOX:'/
C
      DATA NAMNMH/' Total  ','No-Mth  '/
C
      CALL OUTPOL(IP1,IP2)
C
      IF(NUSD.EQ.0) GOTO 10
      IF(NUSD.EQ.1) WRITE(IOUREP,200) (USNAME(ICH,IUSD(1)),ICH=1,4),
     *                                PERIOD
      NWITHC=NUSD-1
      IF(NWITHC.GT.0) WRITE(IOUREP,200)
     *  ((USNAME(ICH,IUSD(ICT)),ICH=1,4),COMMA,ICT=1,NWITHC),
     *  (USNAME(ICH,IUSD(NUSD)),ICH=1,4),PERIOD
  200 FORMAT('0','User supplied',4A8,T46,A1,4A8,T78,A1/
     *       ' ',            T15,4A8,T46,A1,4A8,T78,A1)
C
C  Colons are aligned on columns 30 and 53 for the 80 column scenario header.
C
   10 WRITE(IOUREP,210)
     *   ICY,NAMREG(IREJN),ALT,
     *   NOYES(IMFLAG),AMBT,
     *   NOYES(ATPFLG),PCCN,PCHC,PCCC
  210 FORMAT(
     *'0', T2,'Cal. Year:',I5,
     *    T28,'Region: ',A4,
     *    T50,'Altitude:',F6.0,' Ft.'/
     *' ',T23,'I/M Program: ',A4,
     *    T46,'Ambient Temp:',F7.1,' (F)'/
     *' ',T17,'Anti-tam. Program: ',A4,
     *    T44,'Operating Mode:',F7.1,2(' /',F5.1))
C
      IF(ALHFLG.GT.1) WRITE(IOUREP,215)
     *   ABSHUM,
     *   AC,DB,WB
  215 FORMAT(
```

```
69116          *' ',T17,'Absolute Humidity:',F6.2,
69117          *    T46,'AC (DB / WB):',F7.1,' (',F5.1,' /',F5.1,')')
69118     C
69119           WRITE(IOUREP,220)
69120          *   NAMVEH,(USC8,ITER=1,10),
69121          *   SPD,
69122          *   VMTMIX
69123       220 FORMAT(
69124          *'0','Veh. Type:',10A7/'+',T12,10A7/
69125          *' ','Veh. Spd.:',F5.1,2F7.1,7X,5F7.1/
69126          *' ','  VMT Mix:',3F7.3,7X,5F7.3)
69127     C
69128           IF(ALHFLG.GT.1) WRITE(IOUREP,230)
69129          *   XLOAD,
69130          *   TRAILR
69131       230 FORMAT(
69132          *' ','Ext. Load:',3F7.3/
69133          *' ',' Trlr Tow:',3F7.3)
69134     C
69135           WRITE(IOUREP,240)
69136       240 FORMAT(
69137          *'0','Composite Emission Factors (Gm/Mile)')
69138     C
69139           DO 30 IP=IP1,IP2
69140           IF(IP.NE.1) GOTO 20
69141     C
69142           WRITE(IOUREP,250)
69143          *  NAMNMH(NMHFLG),NAMPOL(IP),
69144          *  (EFFTP(IP,IV),IV=1,3),EFFTP(IP,9),(EFFTP(IP,IV),IV=4,MAXVEH),
69145          *  WFTP(IP)
69146       250 FORMAT(
69147          *' ',A6,A4,
69148          *    F6.2,8F7.2,
69149          *    F7.2)
69150           IF(ICEVFG.EQ.2.OR.ICEVFG.EQ.4) WRITE(IOUREP,260)
69151          *   NAMPOL(IP),
69152          *   (EFEVAP(IV),IV=1,3),EFEVAP(9),(EFEVAP(IV),IV=4,MAXVEH)
69153       260 FORMAT(
69154          *' ',' *Evap',A4,
69155          *    F6.2,8F7.2,'   ----')
69156           GOTO 30
69157     C
69158        20 WRITE(IOUREP,265)
69159          *  NAMPOL(IP),
69160          *  (EFFTP(IP,IV),IV=1,3),EFFTP(IP,9),(EFFTP(IP,IV),IV=4,MAXVEH),
69161          *  WFTP(IP)
69162       265 FORMAT(
69163          *' ','Exhst ',A4,
69164          *    F6.2,8F7.2,
69165          *    F7.2)
69166        30 CONTINUE
69167     C
69168           IF(IDLFLG.EQ.1) GOTO 60
69169           WRITE(IOUREP,270)
69170       270 FORMAT(
69171          *'0','Hot Stabilized Idle Emission Factors (Gm/Min)')
69172     C
69173           DO 50 IP=IP1,IP2
```

```
      IF(IP.NE.1.OR.NMHFLG.EQ.1) GOTO 40
C
      WRITE(IOUREP,275)
     * NAMPOL(IP),
     * (EFIDLE(IP,IV),IV=1,3),EFIDLE(IP,9),(EFIDLE(IP,IV),IV=4,MAXVEH),
     * WIDLE(IP)
  275 FORMAT(
     *' ','NM-Id ',A4,
     *    F6.2,8F7.2,
     *    F7.2)
      GOTO 50
C
   40 WRITE(IOUREP,280)
     * NAMPOL(IP),
     * (EFIDLE(IP,IV),IV=1,3),EFIDLE(IP,9),(EFIDLE(IP,IV),IV=4,MAXVEH),
     * WIDLE(IP)
  280 FORMAT(
     *' ',' Idle ',A4,
     *     F6.2,8F7.2,
     *     F7.2)
   50 CONTINUE
C
   60 WRITE(IOUREP,290)
  290 FORMAT(' ',80('_'))
C
      RETURN
      END
```

```
      SUBROUTINE OUTPOL(IP1,IP2)
C
C  OUTPOL selects loop parameters for pollutant printouts.
C
C  Called by OUTDT1, OUTDT2, OUTDT3 and OUTDT4.
C
C  Input on call:
C
C    common blocks:
C    /FLAGS3/ PRTFLG
C    /SYSCOM/ MAXPOL
C
C  Output on return:
C
C    parameter list: IP1,IP2
C
C
      INTEGER PRTFLG
C
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
C
      IP1=PRTFLG
      IP2=PRTFLG
      IF(PRTFLG.LT.4) GOTO 99
      IP1=1
      IP2=MAXPOL
C
   99 RETURN
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 01
C
C  BLOCK DATA 01 defines and initializes the speed correction factor
C  coefficients for vehicle types LDGV, LDGT1/2 and MC.
C
C  Common block array subscripts:
C
C  AIN(6,21,3)  -  AIN ( ICOEFF, ISP, IP )
C  AIN1(6,21)   -  AIN1 ( ICOEFF, ISP )
C  AIN2(6,21)   -  AIN2 ( ICOEFF, ISP )
C  AIN3(6,21)   -  AIN3 ( ICOEFF, ISP )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------
C  /ACOM/:
C
C  AIN      R    AIN1/2/3 - the 3 arrays in this BD appear as AIN in SPFCLX
C  AIN1     R    HC speed correction factor coefficients for IV=1,2,3,8
C  AIN2     R    CO speed correction factor coefficients for IV=1,2,3,8
C  AIN3     R    NOX speed correction factor coefficients for IV=1,2,3,8
C
C  Local array subscripts:
C
C  A11(6,9)  -  A11( ICOEFF, ISP )
C  A12(6,9)  -  A12( ICOEFF, ISP )
C  A13(6,3)  -  A13( ICOEFF, ISP )
C  A21(6,9)  -  A21( ICOEFF, ISP )
C  A22(6,9)  -  A22( ICOEFF, ISP )
C  A23(6,3)  -  A23( ICOEFF, ISP )
C  A31(6,9)  -  A31( ICOEFF, ISP )
C  A32(6,9)  -  A32( ICOEFF, ISP )
C  A33(6,3)  -  A33( ICOEFF, ISP )
C  ISP is determined by MY, IR, and IV.
C
C  Local array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------
C   The following 3 variables are for HC emissions:
C
C  A11      R    6 coefficients for IG=1 thru 9
C  A12      R    6 coefficients for IG=10 thru 18
C  A13      R    6 coefficients for IG=19 thru 21
C
C   The following 3 variables are for CO emissions:
C
C  A21      R    6 coefficients for IG=1 thru 9
C  A22      R    6 coefficients for IG=10 thru 18
C  A23      R    6 coefficients for IG=19 thru 21
C
C   The following 3 variables are for NOX emissions:
C
C  A31      R    6 coefficients for IG=1 thru 9
C  A32      R    6 coefficients for IG=10 thru 18
```

```
C  A33      R    6 coefficients for IG=19 thru 21
C
C  Notes:
C
C  Speed correction coefficients were updated.
C  (NOX coeff. are based on logs for IG=19+)
C
C  The dimensions were increased from 18 (in MOBILE2) to 21.
C
      COMMON /ACOM/   AIN1(6,21),AIN2(6,21),AIN3(6,21)
C
      DIMENSION A11(6,9),A12(6,9),A13(6,3),
     *          A21(6,9),A22(6,9),A23(6,3),
     *          A31(6,9),A32(6,9),A33(6,3)
C
      EQUIVALENCE
     *(AIN1(1,1),A11(1,1)),(AIN1(1,10),A12(1,1)),(AIN1(1,19),A13(1,1)),
     *(AIN2(1,1),A21(1,1)),(AIN2(1,10),A22(1,1)),(AIN2(1,19),A23(1,1)),
     *(AIN3(1,1),A31(1,1)),(AIN3(1,10),A32(1,1)),(AIN3(1,19),A33(1,1))
C
C  HC speed correction factor coefficients
C
      DATA A11/
     *    2.24612E+00,  -2.90973E-01,   1.58890E-02,
     *                  -4.72494E-04,   6.94077E-06,  -3.92798E-08,
     *    2.31026E+00,  -2.89572E-01,   1.52990E-02,
     *                  -4.46689E-04,   6.48183E-06,  -3.63456E-08,
     *    2.16556E+00,  -2.69992E-01,   1.44221E-02,
     *                  -4.33638E-04,   6.50735E-06,  -3.78100E-08,
     *    2.39726E+00,  -2.99985E-01,   1.61351E-02,
     *                  -4.87491E-04,   7.29093E-06,  -4.19769E-08,
     *    2.40873E+00,  -3.08187E-01,   1.68168E-02,
     *                  -5.06843E-04,   7.53855E-06,  -4.31596E-08,
     *    2.23217E+00,  -2.84985E-01,   1.53833E-02,
     *                  -4.56738E-04,   6.73486E-06,  -3.83798E-08,
     *    2.25223E+00,  -2.87778E-01,   1.56820E-02,
     *                  -4.73179E-04,   7.07954E-06,  -4.08456E-08,
     *    2.02779E+00,  -2.73049E-01,   1.53577E-02,
     *                  -4.60304E-04,   6.78527E-06,  -3.84880E-08,
     *    2.15056E+00,  -2.83620E-01,   1.53836E-02,
     *                  -4.42136E-04,   6.28732E-06,  -3.46311E-08/
      DATA A12/
     *    2.23021E+00,  -2.93648E-01,   1.62356E-02,
     *                  -4.84148E-04,   7.11591E-06,  -4.02861E-08,
     *    2.12230E+00,  -2.91072E-01,   1.69089E-02,
     *                  -5.26148E-04,   8.02705E-06,  -4.70117E-08,
     *    2.15361E+00,  -2.83451E-01,   1.56948E-02,
     *                  -4.69759E-04,   6.93832E-06,  -3.94707E-08,
     *    2.07346E+00,  -2.89353E-01,   1.73042E-02,
     *                  -5.54707E-04,   8.64204E-06,  -5.13107E-08,
     *    2.34948E+00,  -3.04959E-01,   1.68416E-02,
     *                  -5.09623E-04,   7.59516E-06,  -4.34963E-08,
     *    2.11340E+00,  -2.85676E-01,   1.63180E-02,
     *                  -5.00793E-04,   7.55067E-06,  -4.37187E-08,
     *    2.11940E+00,  -2.98632E-01,   1.84473E-02,
     *                  -6.16544E-04,   9.92062E-06,  -6.04021E-08,
     *    2.68382E+00,  -3.44633E-01,   1.95417E-02,
     *                  -6.25720E-04,   9.78442E-06,  -5.83369E-08,
```

```
     *    2.39540E+00,  -3.35781E-01,   2.11609E-02,
     *                  -7.31550E-04,   1.20715E-05,  -7.48567E-08/
      DATA A13/
     *    1.21545E+00,  -7.07633E-02,   4.46460E-04,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00,
     *    1.44386E+00,  -8.80857E-02,   7.35680E-04,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00,
     *    9.84090E-01,  -5.67319E-02,   3.32820E-04,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00/
C
C  CO speed correction factor coefficients
C
      DATA A21/
     *    1.81978E+00,  -2.54663E-01,   1.52347E-02,
     *                  -4.87397E-04,   7.58207E-06,  -4.49514E-08,
     *    2.33989E+00,  -2.96978E-01,   1.60071E-02,
     *                  -4.77396E-04,   7.06752E-06,  -4.03978E-08,
     *    2.44154E+00,  -2.91473E-01,   1.42949E-02,
     *                  -3.87852E-04,   5.29781E-06,  -2.82441E-08,
     *    2.46551E+00,  -3.05023E-01,   1.60497E-02,
     *                  -4.73969E-04,   6.99075E-06,  -3.99758E-08,
     *    2.77804E+00,  -3.19130E-01,   1.53183E-02,
     *                  -4.22327E-04,   5.84948E-06,  -3.14969E-08,
     *    2.78899E+00,  -3.27107E-01,   1.62943E-02,
     *                  -4.67573E-04,   6.71906E-06,  -3.74401E-08,
     *    2.70743E+00,  -3.31038E-01,   1.76179E-02,
     *                  -5.38583E-04,   8.17402E-06,  -4.77803E-08,
     *    1.86919E+00,  -2.76679E-01,   1.72335E-02,
     *                  -5.58279E-04,   8.71678E-06,  -5.16980E-08,
     *    1.82133E+00,  -2.72054E-01,   1.70304E-02,
     *                  -5.52021E-04,   8.62543E-06,  -5.11440E-08/
      DATA A22/
     *    2.01421E+00,  -2.95188E-01,   1.86353E-02,
     *                  -6.21606E-04,   9.93657E-06,  -5.99779E-08,
     *    2.04533E+00,  -3.10618E-01,   2.04852E-02,
     *                  -7.08527E-04,   1.16215E-05,  -7.15690E-08,
     *    2.31868E+00,  -3.41147E-01,   2.09446E-02,
     *                  -6.65891E-04,   1.02225E-05,  -5.98265E-08,
     *    2.57522E+00,  -3.28888E-01,   1.89747E-02,
     *                  -6.28263E-04,   1.00924E-05,  -6.12727E-08,
     *    2.68454E+00,  -3.32817E-01,   1.76277E-02,
     *                  -5.24123E-04,   7.72221E-06,  -4.37025E-08,
     *    2.15487E+00,  -3.29116E-01,   2.10112E-02,
     *                  -6.89057E-04,   1.08390E-05,  -6.47125E-08,
     *    2.54557E+00,  -3.62954E-01,   2.32775E-02,
     *                  -8.15039E-04,   1.36231E-05,  -8.55909E-08,
     *    2.83929E+00,  -3.68756E-01,   2.10782E-02,
     *                  -6.76438E-04,   1.06267E-05,  -6.36405E-08,
     *    2.48747E+00,  -3.91562E-01,   2.70721E-02,
     *                  -9.76178E-04,   1.65270E-05,  -1.04317E-07/
      DATA A23/
     *    1.16177E+00,  -5.92737E-02,   0.00000E+00,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00,
     *    8.81952E-01,  -4.49976E-02,   0.00000E+00,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00,
     *    8.58419E-01,  -4.37969E-02,   0.00000E+00,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00/
C
```

```
C  NOX speed correction factor coefficients
C
      DATA A31/
     *    2.44424E+00,  -2.50107E-01,   1.38293E-02,
     *                  -2.87025E-04,   2.07585E-06,   0.00000E+00,
     *    1.68635E+00,  -1.18303E-01,   6.54975E-03,
     *                  -1.37139E-04,   1.00849E-06,   0.00000E+00,
     *    1.12646E+00,  -3.93405E-02,   2.68637E-03,
     *                  -6.08024E-05,   4.77286E-07,   0.00000E+00,
     *    1.22677E+00,  -4.44978E-02,   2.62476E-03,
     *                  -5.67150E-05,   4.34293E-07,   0.00000E+00,
     *    1.01743E+00,  -1.18958E-02,   9.14365E-04,
     *                  -2.15740E-05,   1.82300E-07,   0.00000E+00,
     *    9.87600E-01,  -1.95674E-02,   1.69645E-03,
     *                  -4.04000E-05,   3.28001E-07,   0.00000E+00,
     *    1.15917E+00,  -4.44536E-02,   2.96425E-03,
     *                  -6.68990E-05,   5.22365E-07,   0.00000E+00,
     *    1.88656E+00,  -1.61289E-01,   9.04995E-03,
     *                  -1.85609E-04,   1.32555E-06,   0.00000E+00,
     *    1.55777E+00,  -1.13032E-01,   6.71832E-03,
     *                  -1.43409E-04,   1.06079E-06,   0.00000E+00/
      DATA A32/
     *    2.04516E+00,  -1.94014E-01,   1.10736E-02,
     *                  -2.31754E-04,   1.68372E-06,   0.00000E+00,
     *    1.63262E+00,  -1.21861E-01,   7.03020E-03,
     *                  -1.46293E-04,   1.06141E-06,   0.00000E+00,
     *    1.44825E+00,  -1.22444E-01,   7.95024E-03,
     *                  -1.71078E-04,   1.25777E-06,   0.00000E+00,
     *    2.45969E-01,   8.41954E-02,  -3.40841E-03,
     *                   6.29880E-05,  -4.13975E-07,   0.00000E+00,
     *    1.28169E+00,  -8.04874E-02,   5.35735E-03,
     *                  -1.18891E-04,   9.01060E-07,   0.00000E+00,
     *    1.53447E+00,  -1.25671E-01,   7.85919E-03,
     *                  -1.69428E-04,   1.25494E-06,   0.00000E+00,
     *    7.04805E-01,   3.81527E-02,  -1.73907E-03,
     *                   3.26140E-05,  -2.03847E-07,   0.00000E+00,
     *    7.83838E-01,   3.28549E-04,   1.06029E-03,
     *                  -3.19350E-05,   2.90389E-07,   0.00000E+00,
     *    9.42131E-01,  -4.23240E-02,   3.86253E-03,
     *                  -9.39853E-05,   7.53883E-07,   0.00000E+00/
      DATA A33/
     *    3.08282E-01,  -2.30362E-02,   3.72830E-04,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00,
     *    2.95046E-01,  -2.36333E-02,   4.37750E-04,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00,
     *    3.86041E-01,  -2.62961E-02,   3.36740E-04,
     *                   0.00000E+00,   0.00000E+00,   0.00000E+00/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 02
C
C  BLOCK DATA 02 initializes fleet characterization data:
C  (1) annual mileage accumulation rates by relative (to evaluation year)
C      model year (JDX) and vehicle type (IV)
C  (2) July 1 registration distributions, also by JDX and IV
C  (3) vehicle miles travelled (vmt) mix, by IV
C
C  Common block array subscripts:
C
C  AMAR(20,8)     -  AMAR    ( JDX, IV )
C  JULMYR(20,8)   -  JULMYR  ( JDX, IV )
C  VMTMIX(8)      -  VMTMIX  ( IV )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------------
C  /MYRSAV/:
C
C  NEWCUM   I    cumulative model year mileage recalculation flag
C  AMAR     R    annual mileage accumulation rates
C  JULMYR   R    July 1 registration distributions
C
C  /VMXCOM/:
C
C  VMTMIX   R    vehicle miles traveled mix
C
C  Local array subscripts:
C
C  V12MAR(20,2)  -  V12MAR (JDX, IV )
C  V34MAR(20,2)  -  V34MAR (JDX, IV )
C  V56MAR(20,2)  -  V56MAR (JDX, IV )
C  V78MAR(20,2)  -  V78MAR (JDX, IV )
C
C  Local array dictionary:
C
C   Name   Type                Descriptions
C  ------  ----  ---------------------------------------------------
C  V12MAR   R    annual mileage accumulation rates for LDGVs and LDGT1s
C  V34MAR   R    annual mileage accumulation rates for LDGT2s and HDGVs
C  V56MAR   R    annual mileage accumulation rates for LDDVs and LDDTs
C  V78MAR   R    annual mileage accumulation rates for HDDVs and MCs
C
C  Notes:
C
C  SAVMYM & SAVMYR from MOBILE2 were changed to AMAR & JULMYR, respectively.
C
C  The model year mileage recalculation flag "NEWCUM" is
C  initialized here.
C
C  Annual mileage accumulation rates and July 1 registration
C  distributions were updated for all vehicle types,
C  except MCs.
C
C  HDDV MAR values are initialized as all zeros, they are
```

```
C  calculated by subroutine HDDMAR, or supplied by user.
C
      REAL JULMYR
C
      COMMON /MYRSAV/ AMAR(20,8),JULMYR(20,8),NEWCUM
      COMMON /VMXCOM/ VMTMIX(8)
C
      DIMENSION V12MAR(20,2),V34MAR(20,2),V56MAR(20,2),V78MAR(20,2)
C
      EQUIVALENCE
     *(AMAR(1,1),V12MAR(1,1)),
     *(AMAR(1,3),V34MAR(1,1)),
     *(AMAR(1,5),V56MAR(1,1)),
     *(AMAR(1,7),V78MAR(1,1))
C
C  Initialize NEWCUM.
C
      DATA NEWCUM /1/
C
C  Typical vmt mix (values are either computed in TFCALX or supplied by user):
C
      DATA VMTMIX/
     *     .7824, .0825, .0468, .0419, .0021, .0004, .0354, .0085/
C
C  Annual average mileage accumulation rates (divided by 100000)
C
      DATA V12MAR/
C  LDGV
     *.12818, .12102, .11427, .10789, .10187,
     *.09619, .09082, .08575, .08096, .07645,
     *.07218, .06815, .06435, .06076, .05737,
     *.05416, .05114, .04829, .04559, .04305,
C  LDGT1
     *.17394, .16132, .14961, .13876, .12869,
     *.11935, .11069, .10266, .09521, .08830,
     *.08189, .07595, .07044, .06533, .06059,
     *.05619, .05211, .04833, .04483, .04157/
      DATA V34MAR/
C  LDGT2
     *.18352, .16946, .15648, .14449, .13342,
     *.12320, .11376, .10504, .09700, .08956,
     *.08270, .07637, .07052, .06511, .06012,
     *.05552, .05126, .04734, .04371, .04036,
C  HDGV
     *.19967, .18077, .16365, .14815, .13413,
     *.12143, .10993, .09952, .09010, .08156,
     *.07384, .06685, .06052, .05479, .04960,
     *.04490, .04065, .03680, .03332, .03016/
      DATA V56MAR/
C  LDDV
     *.12818, .12102, .11427, .10789, .10187,
     *.09619, .09082, .08575, .08096, .07645,
     *.07218, .06815, .06435, .06076, .05737,
     *.05416, .05114, .04829, .04559, .04305,
C  LDDT
     *.17552, .16262, .15068, .13961, .12936,
     *.11986, .11105, .10290, .09534, .08833,
     *.08185, .07583, .07026, .06510, .06032,
```

```
     *.05589, .05179, .04798, .04446, .04119/
      DATA V78MAR/
C  HDDV
C  Warning: There are no default HDDV MAR values.  Either the user supplies
C           them or they are computed by subroutine HDDMAR.
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
C  MC
     * .041, .028, .021, .016, .012, .008, .006, .004, .002, .002,
     * .002, .000, .000, .000, .000, .000, .000, .000, .000, .000/
C
C  Vehicle registration distributions (enter unmodified data)
C
      DATA JULMYR/
C  LDGV
     *.080, .101, .095, .089, .083, .077, .071, .065, .059, .053,
     *.047, .041, .035, .029, .023, .017, .011, .008, .006, .008,
C  LDGT1
     *.067, .085, .081, .077, .073, .069, .065, .061, .057, .053,
     *.048, .044, .040, .036, .032, .028, .024, .020, .016, .024,
C  LDGT2
     *.067, .085, .081, .077, .073, .069, .065, .061, .057, .053,
     *.048, .044, .040, .036, .032, .028, .024, .020, .016, .024,
C  HDGV
     *.079, .136, .116, .099, .085, .072, .062, .053, .045, .038,
     *.033, .028, .024, .020, .018, .015, .013, .011, .009, .045,
C  LDDV
     *.080, .101, .095, .089, .083, .077, .071, .065, .059, .053,
     *.047, .041, .035, .029, .023, .017, .011, .008, .006, .008,
C  LDDT
     *.067, .085, .081, .077, .073, .069, .065, .061, .057, .053,
     *.048, .044, .040, .036, .032, .028, .024, .020, .016, .024,
C  HDDV
     *.090, .151, .126, .105, .088, .073, .061, .051, .043, .036,
     *.030, .025, .021, .017, .014, .012, .010, .008, .007, .031,
C  MC
     * .133, .145, .138, .116, .123, .114, .069, .044, .024, .009,
     * .085, .000, .000, .000, .000, .000, .000, .000, .000, .000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 03
C
C  BLOCK DATA 03 defines the first/last years of the model year groups used
C  to select the slope & intercept of FTP & idle emission rate equations.
C
C  Common block array subscripts:
C
C  MYGERQ(20,2,3,8,2)  -  MYGERQ ( JG, IFL, IP, IV, IR )
C    IFL=1 first year of the model year group,
C    IFL=2 last year of the model year group.
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------
C  /ERQCOM/:
C
C  MYGERQ   I    model year groups for FTP & idle emission rate equation
C                slope & intercept arrays (ZMLBEF, DRBEF, ZMLIDL, DRIDL)
C
C  Local array subscripts:
C
C  IERLO<IV>(20,2,3)  - IERLO<IV> ( IG, IFL, IP )
C  IERHI<IV>(20,2,3)  - IERHI<IV> ( IG, IFL, IP )
C
C  Local array dictionary:
C
C   Name       Type                Descriptions
C  ---------  ----  ---------------------------------------------------
C  IERLO<IV>   I    low altitude my groups for FTP & idle emission rates
C  IERHI<IV>   I    high altitude my groups for FTP & idle emission rates
C
C  Notes:
C
C  The dimensions were increased from 15 (in MOBILE2) to 20 and new model
C  year groups were installed.
C
C
      COMMON /ERQCOM/ MYGERQ(20,2,3,8,2)
C
      DIMENSION
     *   IERLO1(20,2,3),
     *   IERLO2(20,2,3),
     *   IERLO3(20,2,3),
     *   IERLO4(20,2,3),
     *   IERLO5(20,2,3),
     *   IERLO6(20,2,3),
     *   IERLO7(20,2,3),
     *   IERLO8(20,2,3)
C
      EQUIVALENCE
     *   (MYGERQ(1,1,1,1,1),IERLO1(1,1,1)),
     *   (MYGERQ(1,1,1,2,1),IERLO2(1,1,1)),
     *   (MYGERQ(1,1,1,3,1),IERLO3(1,1,1)),
     *   (MYGERQ(1,1,1,4,1),IERLO4(1,1,1)),
     *   (MYGERQ(1,1,1,5,1),IERLO5(1,1,1)),
```

```
     *    (MYGERQ(1,1,1,6,1),IERLO6(1,1,1)),
     *    (MYGERQ(1,1,1,7,1),IERLO7(1,1,1)),
     *    (MYGERQ(1,1,1,8,1),IERLO8(1,1,1))
C
      DIMENSION
     *    IERHI1(20,2,3),
     *    IERHI2(20,2,3),
     *    IERHI3(20,2,3),
     *    IERHI4(20,2,3),
     *    IERHI5(20,2,3),
     *    IERHI6(20,2,3),
     *    IERHI7(20,2,3),
     *    IERHI8(20,2,3)
C
      EQUIVALENCE
     *    (MYGERQ(1,1,1,1,2),IERHI1(1,1,1)),
     *    (MYGERQ(1,1,1,2,2),IERHI2(1,1,1)),
     *    (MYGERQ(1,1,1,3,2),IERHI3(1,1,1)),
     *    (MYGERQ(1,1,1,4,2),IERHI4(1,1,1)),
     *    (MYGERQ(1,1,1,5,2),IERHI5(1,1,1)),
     *    (MYGERQ(1,1,1,6,2),IERHI6(1,1,1)),
     *    (MYGERQ(1,1,1,7,2),IERHI7(1,1,1)),
     *    (MYGERQ(1,1,1,8,2),IERHI8(1,1,1))
C
      DATA IERLO1/
C  HC
     *    1941,1968,1970,1972,1975,1980,1981,1982,1983,1984,
     *    1985,1990,0000,0000,0000,0000,0000,0000,0000,0000,
     *    1967,1969,1971,1974,1979,1980,1981,1982,1983,1984,
     *    1989,2020,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *    1941,1968,1970,1972,1975,1980,1981,1982,1983,1984,
     *    1985,1987,1990,0000,0000,0000,0000,0000,0000,0000,
     *    1967,1969,1971,1974,1979,1980,1981,1982,1983,1984,
     *    1986,1989,2020,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *    1941,1968,1973,1975,1977,1980,1981,1982,1983,1984,
     *    1985,1987,1990,0000,0000,0000,0000,0000,0000,0000,
     *    1967,1972,1974,1976,1979,1980,1981,1982,1983,1984,
     *    1986,1989,2020,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERLO2/
C  HC
     *    1941,1968,1970,1972,1975,1979,1981,1984,1985,1987,
     *    0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *    1967,1969,1971,1974,1978,1980,1983,1984,1986,2020,
     *    0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *    1941,1968,1970,1972,1975,1979,1981,1982,1984,1985,
     *    1987,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *    1967,1969,1971,1974,1978,1980,1981,1983,1984,1986,
     *    2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *    1941,1968,1973,1975,1979,1984,1985,1987,0000,0000,
     *    0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *    1967,1972,1974,1978,1983,1984,1986,2020,0000,0000,
     *    0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
```

```
C
C
      DATA IERL03/
C  HC
     *  1941,1970,1974,1979,1981,1984,1985,1987,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *  1969,1973,1978,1980,1983,1984,1986,2020,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *  1941,1970,1974,1979,1981,1982,1984,1985,1987,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *  1969,1973,1978,1980,1981,1983,1984,1986,2020,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *  1941,1970,1974,1979,1984,1985,1987,0000,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *  1969,1973,1978,1983,1984,1986,2020,0000,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERL04/
C  HC
     *  1941,1963,1970,1974,1978,1979,1981,1983,1984,1985,
     *  1986,1987,1991,1994,1997,0000,0000,0000,0000,0000,
     *  1962,1969,1973,1977,1978,1980,1982,1983,1984,1985,
     *  1986,1990,1993,1996,2020,0000,0000,0000,0000,0000,
C  CO
     *  1941,1963,1970,1974,1978,1979,1981,1983,1984,1985,
     *  1986,1987,1991,1994,1997,0000,0000,0000,0000,0000,
     *  1962,1969,1973,1977,1978,1980,1982,1983,1984,1985,
     *  1986,1990,1993,1996,2020,0000,0000,0000,0000,0000,
C  NOX
     *  1941,1963,1970,1974,1978,1979,1981,1983,1984,1985,
     *  1986,1987,1991,1994,1997,0000,0000,0000,0000,0000,
     *  1962,1969,1973,1977,1978,1980,1982,1983,1984,1985,
     *  1986,1990,1993,1996,2020,0000,0000,0000,0000,0000/
C
C
      DATA IERL05/
C  HC
     *  1941,1975,1977,1978,1979,1980,0000,0000,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *  1974,1976,1977,1978,1979,2020,0000,0000,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *  1941,1975,1977,1978,1979,1980,0000,0000,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *  1974,1976,1977,1978,1979,2020,0000,0000,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *  1941,1975,1977,1978,1979,1980,1981,1985,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *  1974,1976,1977,1978,1979,1980,1984,2020,0000,0000,
     *  0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERL06/
C  HC
```

```
     *   1941,1978,1981,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1980,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1978,1981,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1980,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1978,1981,1987,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1980,1986,2020,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERL07/
C  HC
     *   1941,1963,1966,1969,1972,1975,1980,1982,1985,1986,
     *   1987,1993,1997,0000,0000,0000,0000,0000,0000,0000,
     *   1962,1965,1968,1971,1974,1979,1981,1984,1985,1986,
     *   1992,1996,2020,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1963,1966,1969,1972,1975,1980,1982,1985,1986,
     *   1987,1993,1997,0000,0000,0000,0000,0000,0000,0000,
     *   1962,1965,1968,1971,1974,1979,1981,1984,1985,1986,
     *   1992,1996,2020,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1963,1966,1969,1972,1975,1980,1982,1985,1986,
     *   1987,1993,1997,0000,0000,0000,0000,0000,0000,0000,
     *   1962,1965,1968,1971,1974,1979,1981,1984,1985,1986,
     *   1992,1996,2020,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERL08/
C  HC
     *   1941,1978,1980,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1978,1980,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1978,1980,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERHI1/
C  HC
     *   1941,1968,1970,1972,1975,1977,1978,1980,1981,1982,
     *   1983,1984,1985,1990,0000,0000,0000,0000,0000,0000,
     *   1967,1969,1971,1974,1976,1977,1979,1980,1981,1982,
     *   1983,1984,1989,2020,0000,0000,0000,0000,0000,0000,
```

```
C  CO
     *   1941,1968,1970,1972,1975,1977,1978,1980,1981,1982,
     *   1983,1984,1985,1987,1990,0000,0000,0000,0000,0000,
     *   1967,1969,1971,1974,1976,1977,1979,1980,1981,1982,
     *   1983,1984,1986,1989,2020,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1968,1973,1975,1977,1978,1980,1981,1982,1983,
     *   1984,1985,1987,1990,0000,0000,0000,0000,0000,0000,
     *   1967,1972,1974,1976,1977,1979,1980,1981,1982,1983,
     *   1984,1986,1989,2020,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERHI2/
C  HC
     *   1941,1968,1970,1972,1975,1977,1978,1979,1981,1982,
     *   1984,1985,1987,0000,0000,0000,0000,0000,0000,0000,
     *   1967,1969,1971,1974,1976,1977,1978,1980,1981,1983,
     *   1984,1986,2020,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1968,1970,1972,1975,1977,1978,1979,1981,1982,
     *   1984,1985,1987,0000,0000,0000,0000,0000,0000,0000,
     *   1967,1969,1971,1974,1976,1977,1978,1980,1981,1983,
     *   1984,1986,2020,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1968,1973,1975,1977,1978,1979,1981,1982,1984,
     *   1985,1987,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1967,1972,1974,1976,1977,1978,1980,1981,1983,1984,
     *   1986,2020,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERHI3/
C  HC
     *   1941,1970,1974,1979,1981,1982,1984,1985,1987,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1969,1973,1978,1980,1981,1983,1984,1986,2020,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1970,1974,1979,1981,1982,1984,1985,1987,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1969,1973,1978,1980,1981,1983,1984,1986,2020,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1970,1974,1979,1981,1982,1984,1985,1987,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1969,1973,1978,1980,1981,1983,1984,1986,2020,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERHI4/
C  HC
     *   1941,1963,1970,1974,1978,1979,1981,1983,1984,1985,
     *   1986,1987,1991,1994,1997,0000,0000,0000,0000,0000,
     *   1962,1969,1973,1977,1978,1980,1982,1983,1984,1985,
     *   1986,1990,1993,1996,2020,0000,0000,0000,0000,0000,
C  CO
     *   1941,1963,1970,1974,1978,1979,1981,1983,1984,1985,
     *   1986,1987,1991,1994,1997,0000,0000,0000,0000,0000,
     *   1962,1969,1973,1977,1978,1980,1982,1983,1984,1985,
```

```
     *   1986,1990,1993,1996,2020,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1963,1970,1974,1978,1979,1981,1983,1984,1985,
     *   1986,1987,1991,1994,1997,0000,0000,0000,0000,0000,
     *   1962,1969,1973,1977,1978,1980,1982,1983,1984,1985,
     *   1986,1990,1993,1996,2020,0000,0000,0000,0000,0000/
C
C
      DATA IERHI5/
C  HC
     *   1941,1975,1977,1978,1979,1980,1982,1984,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1974,1976,1977,1978,1979,1981,1983,2020,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1975,1977,1978,1979,1980,1982,1984,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1974,1976,1977,1978,1979,1981,1983,2020,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1975,1977,1978,1979,1980,1981,1985,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1974,1976,1977,1978,1979,1980,1984,2020,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERHI6/
C  HC
     *   1941,1978,1979,1981,1984,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1978,1980,1983,2020,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1978,1979,1981,1984,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1978,1980,1983,2020,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1978,1979,1980,1981,1985,1987,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1978,1979,1980,1984,1986,2020,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERHI7/
C  HC
     *   1941,1963,1966,1969,1972,1975,1980,1982,1985,1986,
     *   1987,1993,1997,0000,0000,0000,0000,0000,0000,0000,
     *   1962,1965,1968,1971,1974,1979,1981,1984,1985,1986,
     *   1992,1996,2020,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1963,1966,1969,1972,1975,1980,1982,1985,1986,
     *   1987,1993,1997,0000,0000,0000,0000,0000,0000,0000,
     *   1962,1965,1968,1971,1974,1979,1981,1984,1985,1986,
     *   1992,1996,2020,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1963,1966,1969,1972,1975,1980,1982,1985,1986,
     *   1987,1993,1997,0000,0000,0000,0000,0000,0000,0000,
```

```
     *   1962,1965,1968,1971,1974,1979,1981,1984,1985,1986,
     *   1992,1996,2020,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IERHI8/
C  HC
     *   1941,1978,1980,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
     *   1941,1978,1980,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
     *   1941,1978,1980,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 04
C
C  BLOCK DATA 04 initializes the deterioration rates and zero mile levels
C  (slopes & intercepts) of the FTP exhaust emission rate equations.
C
C  Common block array subscripts:
C
C  DRBEF(20,3,8,2)   -  DRBEF  ( IG, IP, IV, IR )
C  ZMLBEF(20,3,8,2)  -  ZMLBEF ( IG, IP, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------
C  /BEFCMD/:
C
C  DRBEF    R    FTP exhaust deterioration rates
C
C  /BEFCMZ/:
C
C  ZMLBEF   R    FTP exhaust zero mile emission levels
C
C  Local array subscripts:
C
C  <J><K><L>(20,3,2)  -  <J><K><L> ( IG, IP, IVER )
C
C  where <J> = D (deterioration rate), Z (zero mile level)
C        <K> = L (low altitude region), H (high altitude region)
C        <L> = 1 (LDGV,LDGT1), 2 (LDGT2,HDGV), 3 (LDDV,LDDT), 4 (HDDV,MC)
C        IVER = 1 (1st of vt pair K), 2 (2nd of vt pair K)
C
C  Local array dictionary:
C
C   Name      Type                Descriptions
C  ---------  ----  ------------------------------------------------------
C  <J><K><L>   R    as defined above, the slope/intercept <J> in region <K>
C                   for vehicle type pair <L> of the FTP exhaust emission
C                   rate equation
C
C  Notes:
C
C  New DRs and ZMLs were installed for 1975+ years.  The my group dimension
C  increased in all arrays from 15 (in MOBILE2) to 20.
C
      COMMON /BEFCMD/ DRBEF(20,3,8,2)
      COMMON /BEFCMZ/ ZMLBEF(20,3,8,2)
C
      DIMENSION DL1(20,3,2),DL2(20,3,2),DL3(20,3,2),DL4(20,3,2)
      DIMENSION DH1(20,3,2),DH2(20,3,2),DH3(20,3,2),DH4(20,3,2)
      DIMENSION ZL1(20,3,2),ZL2(20,3,2),ZL3(20,3,2),ZL4(20,3,2)
      DIMENSION ZH1(20,3,2),ZH2(20,3,2),ZH3(20,3,2),ZH4(20,3,2)
C
      EQUIVALENCE
     *  (DRBEF(1,1,1,1),DL1(1,1,1)), (DRBEF(1,1,3,1),DL2(1,1,1)),
     *  (DRBEF(1,1,5,1),DL3(1,1,1)), (DRBEF(1,1,7,1),DL4(1,1,1)),
     *  (DRBEF(1,1,1,2),DH1(1,1,1)), (DRBEF(1,1,3,2),DH2(1,1,1)),
```

```
     *  (DRBEF(1,1,5,2),DH3(1,1,1)), (DRBEF(1,1,7,2),DH4(1,1,1))
C
      EQUIVALENCE
     *  (ZMLBEF(1,1,1,1),ZL1(1,1,1)), (ZMLBEF(1,1,3,1),ZL2(1,1,1)),
     *  (ZMLBEF(1,1,5,1),ZL3(1,1,1)), (ZMLBEF(1,1,7,1),ZL4(1,1,1)),
     *  (ZMLBEF(1,1,1,2),ZH1(1,1,1)), (ZMLBEF(1,1,3,2),ZH2(1,1,1)),
     *  (ZMLBEF(1,1,5,2),ZH3(1,1,1)), (ZMLBEF(1,1,7,2),ZH4(1,1,1))
C
C FTP exhaust emission zero mileage emission levels & deterioration
C (per 10000 miles) rates.  1 line per pollutant for each vehicle type
C
C Deterioration rates
C
C Low altitude region
C
      DATA DL1/
C LDGV
     * 0.18, 0.25, 0.37, 0.17, 0.27, 0.10, 0.12, 0.12, 0.12, 0.13,
     * 0.12, 0.11, 8*0.,
     * 2.25, 2.55, 3.13, 2.44, 2.59, 0.73, 1.90, 1.91, 1.90, 2.07,
     * 1.96, 1.87, 1.82, 7*0.,
     * 0.00, 0.00, 0.04, 0.03, 0.09, 0.07, 0.08, 0.08, 0.08, 0.09,
     * 0.09, 0.10, 0.10, 7*0.,
C LDGT1
     * 0.18, 0.25, 0.37, 0.17, 0.27, 0.27, 0.19, 0.13, 0.07, 0.06,10*0.,
     * 2.25, 2.55, 3.13, 2.44, 2.59, 2.59, 1.13, 1.13, 0.98, 0.49, 0.93,
     * 9*0.,
     * 0.00, 0.00, 0.04, 0.03, 0.09, 0.09, 0.04, 0.04,12*0./
      DATA DL2/
C LDGT2
     * 0.18, 0.25, 0.17, 0.27, 0.19, 0.13, 0.07, 0.06,12*0.,
     * 2.25, 2.55, 2.44, 2.59, 1.13, 1.13, 0.98, 0.49, 0.91,11*0.,
     * 0.00, 0.00, 0.04, 0.09, 0.09, 0.04, 0.04,13*0.,
C HDGV
     * 0.31, 0.32, 0.37, 0.22, 0.19, 0.19, 0.17, 0.17, 0.17, 0.06,
     * 0.06, 0.09, 0.08, 0.08, 0.08, 5*0.,
     * 4.81, 4.99, 6.68, 5.74, 5.07, 4.83, 4.50, 4.45, 4.47, 0.92,
     * 0.93, 0.58, 0.57, 0.55, 0.54, 5*0.,
     * 0.00, 0.00, 0.00, 0.07, 0.06, 0.06, 0.06, 0.06, 0.06, 0.03,
     * 0.03, 0.10, 0.09, 0.09, 0.09, 5*0./
      DATA DL3/
C LDDV
     * 0.08, 0.07, 0.07, 0.07, 0.07, 0.03,14*0.,
     * 0.13, 0.09, 0.09, 0.09, 0.09, 0.04,14*0.,
     * 0.04, 0.04, 0.04, 0.04, 0.04, 0.04, 0.03, 0.03,12*0.,
C LDDT
     * 0.08, 0.08, 0.04, 17*0.,
     * 0.10, 0.10, 0.04, 17*0.,
     * 0.08, 0.08, 0.03, 0.03,16*0./
      DATA DL4/
C HDDV
     * 0.05, 0.05, 0.06, 0.06, 0.06, 0.06, 0.06, 0.05, 0.02, 0.02,
     * 0.02, 0.02, 0.02, 7*0.,
     * 0.14, 0.14, 0.14, 0.15, 0.16, 0.16, 0.14, 0.13, 0.12, 0.12,
     * 0.12, 0.12, 0.11, 7*0.,
     * 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,
     * 0.05, 0.05, 0.05, 7*0.,
C MC
```

```
     * 0.78, 1.65, 1.73,17*0.,
     * 2.47, 3.96, 2.02,17*0.,
     * 0.06, 0.00, 0.00,17*0./
C
C  High altitude region
C
      DATA DH1/
C  LDGV
     * 0.18, 0.25, 0.37, 0.17, 0.27, 0.27, 0.27, 0.10, 0.14, 0.14,
     * 0.14, 0.15, 0.14, 0.13, 6*0.,
     * 2.25, 2.55, 3.13, 2.44, 2.59, 2.59, 2.59, 0.73, 3.26,
     * 3.29, 3.33, 3.55, 3.35, 3.13, 3.05, 5*0.,
     * 0.0 , 0.0 , 0.04, 0.03, 0.09, 0.09, 0.07, 0.08, 0.08,
     * 0.08, 0.09, 0.09, 0.10, 0.10, 6*0.,
C  LDGT1
     * 0.18, 0.25, 0.37, 0.17, 0.27, 0.27, 0.27, 0.27, 0.19,
     * 0.19, 0.13, 0.07, 0.07, 7*0.,
     * 2.25, 2.25, 3.13, 2.44, 2.59, 2.59, 2.59, 2.59, 1.13,
     * 1.13, 0.98, 0.49, 1.56, 7*0.,
     * 0.0 , 0.0 , 0.04, 0.03, 0.03, 0.03, 0.09, 0.09, 0.09,
     * 0.09, 0.04, 0.04, 8*0./
      DATA DH2/
C  LDGT2
     * 0.18, 0.25, 0.17, 0.27, 0.19, 0.19, 0.13, 0.07, 0.06,11*0.,
     * 2.25, 2.55, 2.44, 2.59, 1.13, 1.13, 0.98, 0.49, 0.91,11*0.,
     * 0.0 , 0.0 , 0.04, 0.09, 0.09, 0.09, 0.09, 0.04, 0.04,11*0.,
C  HDGV
     * 0.31, 0.32, 0.37, 0.22, 0.19, 0.19, 0.17, 0.17, 0.17, 0.06,
     * 0.06, 0.09, 0.08, 0.08, 0.08, 5*0.,
     * 4.81, 4.99, 6.68, 5.74, 5.07, 4.83, 4.50, 4.45, 4.47, 0.92,
     * 0.93, 0.58, 0.57, 0.55, 0.54, 5*0.,
     * 0.00, 0.00, 0.00, 0.07, 0.06, 0.06, 0.06, 0.06, 0.06, 0.03,
     * 0.03, 0.10, 0.09, 0.09, 0.09, 5*0./
      DATA DH3/
C  LDDV
     * 0.08, 0.07, 0.07, 0.07, 0.07, 0.03, 0.03, 0.03,12*0.,
     * 0.13, 0.09, 0.09, 0.09, 0.09, 0.04, 0.04, 0.04,12*0.,
     * 0.04, 0.04, 0.04, 0.04, 0.04, 0.04, 0.03, 0.03,12*0.,
C  LDDT
     * 0.08, 0.08, 0.08, 0.04, 0.04, 15*0.,
     * 0.10, 0.10, 0.10, 0.10, 0.04, 0.04, 14*0.,
     * 0.06, 0.06, 0.06, 0.06, 0.03, 0.03, 0.03, 13*0./
      DATA DH4/
C  HDDV
     * 0.05, 0.05, 0.06, 0.06, 0.06, 0.06, 0.06, 0.05, 0.02, 0.02,
     * 0.02, 0.02, 0.02, 7*0.,
     * 0.14, 0.14, 0.14, 0.15, 0.16, 0.16, 0.14, 0.13, 0.12, 0.12,
     * 0.12, 0.12, 0.11, 7*0.,
     * 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,
     * 0.05, 0.05, 0.05, 7*0.,
C  MC
     * 0.78, 1.65, 1.73, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,11*0.,
     * 2.47, 3.96, 2.02. 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,11*0.,
     * 0.06, 0.0 , 0.0 , 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,11*0./
C
C  Zero mile exhaust levels
C
C  Low altitude region
```

```
C
      DATA ZL1/
C  LDGV
     * 7.25, 4.43, 3.00, 3.36, 1.07, 0.36, 0.25, 0.22, 0.21, 0.20,
     * 0.20, 0.20, 8*0.,
     *78.27,56.34,42.17,40.78,18.23, 6.09, 2.13, 1.09, 1.09, 0.99,
     * 1.04, 1.11, 1.14, 7*0.,
     * 3.44, 4.35, 2.87, 2.44, 1.70, 1.50, 0.59, 0.63, 0.56, 0.53,
     * 0.53, 0.53, 0.53, 7*0.,
C  LDGT1
     * 7.25, 4.43, 3.00, 3.36, 1.80, 0.92, 0.92, 0.58, 0.45, 0.51,10*0.,
     *78.27,56.34,42.17,40.78,24.55,13.67,13.67,13.67, 7.41, 6.43, 5.60,
     * 9*0.,
     * 3.44, 4.35, 2.87, 2.70, 1.74, 1.74, 1.74, 0.86,12*0./
      DATA ZL2/
C  LDGT2
     * 9.57, 6.28, 6.28, 0.92, 0.92, 0.58, 0.45, 0.51,12*0.,
     *93.98,60.08,60.08,13.67,13.67,13.67, 7.41, 6.43, 5.60,11*0.,
     * 5.44, 6.45, 4.61, 1.74, 1.74, 1.74, 0.86,13*0.,
C  HDGV
     *16.49,17.08, 9.21, 8.28, 7.31, 3.07, 2.86, 2.83, 2.84, 2.45,
     * 2.16, 0.97, 0.95, 0.93, 0.91, 5*0.,
     *200.80,208.10,157.48,141.48,124.90,104.78,97.71,96.53,97.15,
     * 38.30, 30.45, 13.26, 12.98, 12.63, 12.39, 5*0.,
     * 7.87, 8.15, 9.35, 6.12, 5.41, 5.14, 4.80, 4.74, 4.77, 4.79,
     * 4.82, 4.60, 4.50, 4.38, 4.30, 5*0./
      DATA ZL3/
C  LDDV
     * 1.31, 0.42, 0.42, 0.42, 0.42, 0.29,14*0.,
     * 2.71, 1.17, 1.17, 1.17, 1.17, 1.15,14*0.,
     * 1.46, 1.40, 1.40, 1.40, 1.40, 1.40, 1.31, 0.87,12*0.,
C  LDDT
     * 0.86, 0.86, 0.43, 17*0.,
     * 1.97, 1.97, 1.33, 17*0.,
     * 1.83, 1.83, 1.48, 0.94,16*0./
      DATA ZL4/
C  HDDV
     * 3.37, 3.36, 3.48, 3.70, 3.93, 3.89, 3.53, 3.25, 3.11, 2.50,
     * 2.43, 2.39, 2.37, 7*0.,
     * 9.84, 9.80,10.15,10.80,11.46,11.18, 9.50, 8.75, 8.45, 8.30,
     * 8.07, 7.93, 7.86, 7*0.,
     *21.94,21.85,22.61,24.06,25.53,24.77,20.50,18.88,18.23,17.90,
     *11.19,10.98,10.89, 7*0.,
C  MC
     * 8.90, 3.40, 2.70,17*0.,
     *34.30,23.10,18.50,17*0.,
     * 0.20, 0.65, 0.85,17*0./
C
C  High altitude region
C
      DATA ZH1/
C  LDGV
     *  9.35, 5.60, 4.58, 4.58, 2.02, 0.95, 2.10, 0.78, 0.54, 0.37,
     *  0.36, 0.29, 0.29, 0.29, 6*0.,
     *117.70, 85.54, 79.64, 75.63, 43.07, 16.97, 39.78, 22.80,
     * 11.43,  7.18,  5.01,  3.18,  3.16,  3.02,  3.03,  5*0.,
     *  1.96,  2.91,  1.91,  1.70,  1.42,  1.00,  0.82,  0.46,
     *  0.60,  0.56,  0.54,  0.54,  0.54,  0.54, 6*0.,
```

```
C  LDGT1
     *9.35, 5.60, 4.58, 4.58, 3.40, 1.60, 3.53, 1.81, 1.81,
     *1.08, 0.72, 0.55, 0.62, 7*0.,
     *117.70,85.54,79.64,75.63,58.01,22.86,53.57,29.83,29.83,
     * 19.75,12.95, 8.88, 7.74, 7*0.,
     * 1.96, 2.91, 1.91, 1.88, 2.25, 1.88, 1.02, 1.02,
     * 1.74, 1.74, 1.74, 0.86, 8*0./
      DATA ZH2/
C  LDGT2
     *12.35, 8.56, 8.56, 1.81, 1.81, 1.08, 0.72, 0.55, 0.62,11*0.,
     *141.35,107.72,107.72,29.83,29.83,19.75,12.95,8.88,7.74,11*0.,
     * 3.10, 4.32, 3.07, 1.02, 1.02, 1.74, 1.74, 1.74, 0.86,11*0.,
C  HDGV
     *22.46,23.28,12.55,11.28, 9.96, 4.18, 3.90, 3.85, 3.87, 3.34,
     * 2.94, 1.60, 1.56, 1.52, 1.49, 5*0.,
     *360.04,373.12,282.36,253.67,223.94,187.87,175.19,173.09,
     *174.18, 68.67, 54.59, 34.41, 33.68, 32.77, 32.14,  5*0.,
     * 5.24, 5.43, 6.23, 4.08, 3.60, 3.43, 3.20, 3.16, 3.18, 3.19,
     * 3.21, 3.64, 3.56, 3.46, 3.40, 5*0./
      DATA ZH3/
C  LDDV
     *  3.01,  0.97,  0.97,  0.97,  0.97,  0.67, 0.40, 0.29,12*0.,
     *  4.74,  2.05,  2.05,  2.05,  2.05,  2.01, 2.01, 1.15,12*0.,
     *  1.46,  1.40,  1.40,  1.40,  1.40,  1.40, 1.31, 0.87,12*0.,
C  LDDT
     *  1.98,  1.98,  1.98,  0.99,  0.54,  15*0.,
     *  3.45,  3.45,  3.45,  3.45,  2.33,  2.33, 14*0.,
     *  1.83,  1.83,  1.83,  1.83,  1.48,  1.48,  0.94, 13*0./
      DATA ZH4/
C  HDDV
     * 7.76, 7.73, 8.00, 8.51, 9.03, 8.95, 8.11, 7.47, 7.16, 5.75,
     * 5.59, 5.49, 5.44, 7*0.,
     *17.22,17.15,17.75,18.89,20.04,19.56,16.64,15.32,14.80,14.53,
     *14.14,13.88,13.76, 7*0.,
     *21.94,21.85,22.61,24.06,25.53,24.77,20.50,18.88,18.23,17.90,
     *11.19,10.98,10.89, 7*0.,
C  MC
     * 11.48,  4.30,  4.12,  0.00,  0.00,  0.0 , 0.0 , 0.0 ,12*0. ,
     * 51.59, 35.07, 34.95,  0.00,  0.00,  0.0 , 0.0 , 0.0 ,12*0. ,
     *  0.11,  0.43,  0.57,  0.00,  0.00,  0.00, 0.00, 0.00,12*0./
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 05
C
C  BLOCK DATA 05 initializes the deterioration rates and zero mile levels
C  (slopes & intercepts) of the idle exhaust emission rate equations.
C
C  Common block array subscripts:
C
C  DRIDL(20,3,8,2)   -  DRIDL  ( IG, IP, IV, IR )
C  ZMLIDL(20,3,8,2)  -  ZMLIDL ( IG, IP, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /IDLCMD/:
C
C  DRIDL    R    idle exhaust deterioration rates
C
C  /IDLCMZ/:
C
C  ZMLIDL   R    idle exhaust zero mile emission levels
C
C  Local array subscripts:
C
C  I<J><K><L>(20,3,2)  -  I<J><K><L> ( IG, IP, IVER )
C
C  where <J> = D (deterioration rate), Z (zero mile level)
C        <K> = L (low altitude region), H (high altitude region)
C        <L> = 1 (LDGV,LDGT1), 2 (LDGT2,HDGV), 3 (LDDV,LDDT), 4 (HDDV,MC)
C        IVER = 1 (1st of vt pair K), 2 (2nd of vt pair K)
C
C  Local array dictionary:
C
C   Name        Type              Descriptions
C  ----------  ----  ----------------------------------------------------
C  I<J><K><L>   R    as defined above, the slope/intercept <J> in region <K>
C                    for vehicle type pair <L> of the idle exhaust emission
C                    rate equation
C
C  Notes:
C
C  The my group dimension was increased from 15 (in MOBILE2) to 20 for both
C  arrays.  The levels and rates were updated for 1981+ years.
C
      COMMON /IDLCMD/ DRIDL(20,3,8,2)
      COMMON /IDLCMZ/ ZMLIDL(20,3,8,2)
C
      REAL IDL1(20,3,2),IDL2(20,3,2),IDL3(20,3,2),IDL4(20,3,2)
      REAL IDH1(20,3,2),IDH2(20,3,2),IDH3(20,3,2),IDH4(20,3,2)
      REAL IZL1(20,3,2),IZL2(20,3,2),IZL3(20,3,2),IZL4(20,3,2)
      REAL IZH1(20,3,2),IZH2(20,3,2),IZH3(20,3,2),IZH4(20,3,2)
C
      EQUIVALENCE
     * (DRIDL(1,1,1,1),IDL1(1,1,1)), (DRIDL(1,1,3,1),IDL2(1,1,1)),
     * (DRIDL(1,1,5,1),IDL3(1,1,1)), (DRIDL(1,1,7,1),IDL4(1,1,1)),
     * (DRIDL(1,1,1,2),IDH1(1,1,1)), (DRIDL(1,1,3,2),IDH2(1,1,1)),
```

```
     *  (DRIDL(1,1,5,2),IDH3(1,1,1)), (DRIDL(1,1,7,2),IDH4(1,1,1))
C
      EQUIVALENCE
     *  (ZMLIDL(1,1,1,1),IZL1(1,1,1)), (ZMLIDL(1,1,3,1),IZL2(1,1,1)),
     *  (ZMLIDL(1,1,5,1),IZL3(1,1,1)), (ZMLIDL(1,1,7,1),IZL4(1,1,1)),
     *  (ZMLIDL(1,1,1,2),IZH1(1,1,1)), (ZMLIDL(1,1,3,2),IZH2(1,1,1)),
     *  (ZMLIDL(1,1,5,2),IZH3(1,1,1)), (ZMLIDL(1,1,7,2),IZH4(1,1,1))
C
C  Idle exhaust emission deterioration (per 10000 miles) rates and zero mile
C  levels.  1 line per pollutant for each vehicle type
C
C  Deterioration rates
C
C  Low altitude region
C
      DATA IDL1/
C  LDGV
     * 0.03, 0.06, 0.07, 0.07, 0.07, 0.04, 0.04, 0.04, 0.04, 0.04,
     * 0.04, 0.04, 8*0.,
     * 0.40, 0.63, 0.88, 0.76, 0.85, 0.85, 0.82, 0.81, 0.82, 0.82,
     * 0.82, 0.82, 0.82, 7*0.,
     * 0.00, 0.00, 0.00, 0.00, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01,
     * 0.01, 0.01, 0.01, 7*0.,
C  LDGT1
     * 0.03, 0.06, 0.07, 0.04, 0.06, 0.02, 0.02, 0.02, 0.01, 0.01,10*0.,
     * 0.40, 0.63, 0.88, 0.76, 0.72, 0.32, 0.27, 0.24, 0.14, 0.18, 0.18,
     * 9*0.,
     * 20*0./
      DATA IDL2/
C  LDGT2
     * 0.03, 0.04, 0.03, 0.02, 0.02, 0.01, 0.01, 0.01,12*0.,
     * 0.45, 0.52, 0.49, 0.32, 0.27, 0.24, 0.14, 0.18, 0.18,11*0.,
     * 20*0.,
C  HDGV
     * 0.04, 0.04, 0.04, 0.02, 0.02, 0.01, 0.02, 0.03, 0.03, 0.03,
     * 0.03, 0.03, 0.03, 0.03, 0.03, 5*0.,
     * 0.53, 0.53, 0.28, 0.27, 0.27, 0.28, 0.28, 0.28, 0.14, 0.18,
     * 0.18, 0.18, 0.18, 0.18, 0.18, 5*0.,
     * 20*0./
      DATA IDL3/
C  LDDV
     * 0.01, 0.00, 0.00, 0.00, 0.00, 0.00,14*0.,
     * 0.01, 0.01, 0.01, 0.01, 0.01, 0.01,14*0.,
     * 0.00, 0.00, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01,12*0.,
C  LDDT
     * 0.01, 0.01, 0.01, 17*0.,
     * 0.02, 0.01, 0.01, 17*0.,
     * 0.01, 0.01, 0.01, 0.01,16*0./
      DATA IDL4/
C  HDDV
     * 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,
     * 0.00, 0.00, 0.00, 7*0.,
     * 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01,
     * 0.01, 0.01, 0.01, 7*0.,
     * 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,
     * 0.00, 0.00, 0.00, 7*0.,
C  MC
     * 0.42, 0.36, 0.38,17*0.,
```

```
     * 0.23, 0.50, 0.26,17*0.,
     * 0.00, 0.00, 0.00,17*0./
C
C  High altitude region
C
      DATA IDH1/
C  LDGV
     H 0.03, 0.06, 0.07, 0.04, 0.07, 0.03, 0.03, 0.03, 0.03,
     H 0.03, 0.03, 0.03, 0.03, 0.03, 6*0.,
     C 0.40, 0.63, 0.88, 0.76, 0.85, 0.42, 0.42, 0.42, 0.61,
     C 0.61, 0.61, 0.62, 0.62, 0.62, 0.62, 5*0.,
     N 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.01, 0.01,
     N 0.01, 0.01, 0.01, 0.01, 0.01, 6*0.,
C  LDGT1
     H 0.03, 0.06, 0.07, 0.04, 0.06, 0.06, 0.06, 0.02, 0.02,
     H 0.02, 0.01, 0.01, 0.01, 7*0.,
     C 0.40, 0.63, 0.88, 0.76, 0.72, 0.72, 0.72, 0.32, 0.27,
     C 0.24, 0.14, 0.28, 0.28, 7*0.,
     N 20*0./
      DATA IDH2/
C  LDGT2
     H 0.03, 0.04, 0.03, 0.02, 0.02, 0.02, 0.01, 0.01, 0.01,11*0.,
     C 0.45, 0.52, 0.49, 0.32, 0.27, 0.24, 0.14, 0.28, 0.28,11*0.,
     N 20*0.,
C  HDGV
     * 0.04, 0.04, 0.04, 0.02, 0.02, 0.01, 0.01, 0.01, 0.03, 0.04,
     * 0.04, 0.04, 0.04, 0.04, 0.04, 5*0.,
     * 0.53, 0.53, 0.28, 0.27, 0.27, 0.28, 0.28, 0.28, 0.14, 0.28,
     * 0.28, 0.28, 0.28, 0.28, 0.28, 5*0.,
     * 20*0./
      DATA IDH3/
C  LDDV
     H 0.01, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.0 ,11*0.,
     C 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.0 ,11*0.,
     N 0.0 , 0.0 , 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.00,11*0.,
C  LDDT
     H 0.01, 0.01, 0.01, 0.00, 0.00, 0.0 , 0.0 , 0.0 , 0.0 ,11*0.,
     C 0.02, 0.01, 0.01, 0.00, 0.00, 0.0 , 0.0 , 0.0 , 0.0 ,11*0.,
     N 0.01, 0.01, 0.01, 0.01, 0.00, 0.0 , 0.0 , 0.0 , 0.0 ,11*0./
      DATA IDH4/
C  HDDV
     * 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,
     * 0.00, 0.00, 0.00, 7*0.,
     * 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01, 0.01,
     * 0.01, 0.01, 0.01, 7*0.,
     * 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,
     * 0.00, 0.00, 0.00, 7*0.,
C  MC
     H 0.42, 0.36, 0.38, 0.00, 0.00, 0.0 , 0.0 , 0.0 , 0.0 ,11*0.,
     C 0.23, 0.50, 0.26, 0.00, 0.00, 0.0 , 0.0 , 0.0 , 0.0 ,11*0.,
     N 0.0 , 0.0 , 0.0 , 0.0 , 0.00, 0.0 , 0.0 , 0.0 , 0.0 ,11*0./
C
C  Zero mile levels
C
C  Low altitude region
C
      DATA IZL1/
C  LDGV
```

```
     * 1.32, 1.07, 0.54, 0.72, 0.30, 0.07, 0.09, 0.09, 0.09, 0.09,
     * 0.09, 0.09, 8*0.,
     *13.76,13.99,11.84,12.66, 6.00, 1.83, 1.63, 1.55, 1.48, 1.48,
     * 1.48, 1.48, 1.48, 7*0.,
     * 0.09 ,0.17, 0.14, 0.26, 0.18, 0.17, 0.08, 0.08, 0.08, 0.08,
     * 0.08, 0.08, 0.08, 7*0.,
C  LDGT1
     * 1.32, 1.07, 0.54, 0.72, 0.37, 0.07, 0.06, 0.04, 0.03, 0.03,10*0.,
     *13.76,13.99,11.84,12.66, 6.27, 1.57, 1.31, 1.19, 0.69, 0.34, 0.34,
     * 9*0.,
     * 0.09, 0.17, 0.14, 0.06, 0.06, 0.05, 0.02, 0.02,12*0./
      DATA IZL2/
C  LDGT2
     * 1.67, 1.06, 1.06, 0.07, 0.06, 0.04, 0.03, 0.03,12*0.,
     *18.98,11.53,11.53, 1.57, 1.31, 1.19, 0.69, 0.34, 0.34,11*0.,
     * 0.08, 0.10, 0.07, 0.06, 0.05, 0.02, 0.02,13*0.,
C  HDGV
     * 2.29, 2.29, 0.85, 0.85, 0.85, 0.14, 0.43, 0.43, 0.43, 0.10,
     * 0.10, 0.10, 0.10, 0.10, 0.10, 5*0.,
     *22.18,22.18, 6.15, 6.15, 6.15, 6.42, 6.42, 6.42, 0.70, 0.34,
     * 0.34, 0.34, 0.34, 0.34, 0.34, 5*0.,
     * 0.04, 0.04, 0.05, 0.06, 0.06, 0.06, 0.06, 0.06, 0.07, 0.01,
     * 0.01, 0.01, 0.01, 0.01, 0.01, 5*0./
      DATA IZL3/
C  LDDV
     * 0.14, 0.03, 0.04, 0.06, 0.05, 0.03,14*0.,
     * 0.23, 0.14, 0.16, 0.17, 0.18, 0.15,14*0.,
     * 0.13, 0.22, 0.17, 0.20, 0.18, 0.19, 0.14, 0.09,12*0.,
C  LDDT
     * 0.08, 0.10, 0.07, 17*0.,
     * 0.30, 0.31, 0.31, 17*0.,
     * 0.19, 0.32, 0.34, 0.13,16*0./
      DATA IZL4/
C  HDDV
     * 0.36, 0.36, 0.36, 0.36, 0.36, 0.36, 0.36, 0.36, 0.27, 0.27,
     * 0.27, 0.27, 0.27, 7*0.,
     * 0.67, 0.67, 0.67, 0.67, 0.67, 0.67, 0.67, 0.67, 0.67, 0.67,
     * 0.67, 0.67, 0.67, 7*0.,
     * 0.92, 0.92, 0.92, 0.92, 0.92, 0.92, 0.92, 0.92, 0.22, 0.22,
     * 0.22, 0.22, 0.22, 7*0.,
C  MC
     * 1.95, 0.74, 0.59,17*0.,
     * 4.33, 2.92, 2.34,17*0.,
     * 0.01, 0.03, 0.04,17*0./
C
C  High altitude region
C
      DATA IZH1/
C  LDGV
     H  1.63,  0.76,  0.71,  0.74,  0.27,  0.12, 0.24, 0.05, 0.07,
     H  0.06,  0.06,  0.06,  0.05,  0.05,  6*0.,
     C 15.98, 11.24, 12.93, 13.99,  7.42,  2.87, 5.79, 2.68, 1.74,
     C  1.46,  1.44,  1.06,  1.06,  1.06,  1.06, 5*0.,
     N  0.11,  0.09,  0.07,  0.07,  0.06,  0.04, 0.04, 0.03, 0.03,
     N  0.03,  0.03,  0.03,  0.03,  0.03,  6*0.,
C  LDGT1
     H  1.63,  0.76,  0.71,  0.74,  0.33,  0.15, 0.30, 0.06, 0.10,
     H  0.07,  0.04,  0.04,  0.04,  7*0.,
```

```
      C 15.98, 11.24, 12.93, 13.99,  7.76,  3.00, 6.05, 1.52, 2.27,
      C  1.72,  0.69,  0.49,  0.49,  7*0.,
      N  0.11,  0.09,  0.07,  0.02,  0.02,  0.01, 0.01, 0.06, 0.06,
      N  0.05,  0.02,  0.02,  8*0./
       DATA IZH2/
C  LDGT2
      H 2.06, 1.09, 1.09, 0.06, 0.10, 0.07, 0.04, 0.04, 0.04,11*0.,
      C22.04,12.74,12.74, 1.52, 2.27, 1.72, 0.69, 0.49, 0.49,11*0.,
      N 0.10, 0.05, 0.04, 0.01, 0.06, 0.06, 0.05, 0.02, 0.02,11*0.,
C  HDGV
      H 2.83, 2.83, 0.87, 0.87, 0.87, 0.44, 0.44, 0.44, 0.23, 0.12,
      H 0.12, 0.12, 0.12, 0.12, 0.12, 5*0.,
      C25.75,25.75, 6.80, 6.80, 6.80, 7.09, 7.09, 7.09, 1.21, 0.49,
      C 0.49, 0.49, 0.49, 0.49, 0.49, 5*0.,
      N 0.05, 0.05, 0.03, 0.03, 0.03, 0.03, 0.03, 0.03, 0.07, 0.01,
      N 0.01, 0.01, 0.01, 0.01, 0.01, 5*0./
       DATA IZH3/
C  LDDV
      H  0.32,  0.07,  0.09,  0.14,  0.12,  0.07, 0.04, 0.03, 0.0 ,11*0.,
      C 00.40, 00.25,  0.28,  0.30,  0.32,  0.26, 0.26, 0.15, 0.0 ,11*0.,
      N  0.13,  0.22,  0.17,  0.20,  0.18,  0.19, 0.14, 0.09, 0.00,11*0.,
C  LDDT
      H  0.18,  0.23,  0.23,  0.07,  0.07, 15*0.,
      C  0.53,  0.54,  0.54,  0.54,  0.31,  0.31, 14*0.,
      N  0.19,  0.32,  0.32,  0.32,  0.34,  0.34,  0.13, 13*0./
       DATA IZH4/
C  HDDV
      * 0.83, 0.83, 0.83, 0.83, 0.83, 0.83, 0.83, 0.83, 0.62, 0.62,
      * 0.62, 0.62, 0.62, 7*0.,
      * 1.17, 1.17, 1.17, 1.17, 1.17, 1.17, 1.17, 1.17, 1.17, 1.17,
      * 1.17, 1.17, 1.17, 7*0.,
      * 0.92, 0.92, 0.92, 0.92, 0.92, 0.92, 0.92, 0.92, 0.22, 0.22,
      * 0.22, 0.22, 0.22, 7*0.,
C  MC
      H  2.41,  0.53,  0.78,  0.00,  0.00,  0.0 , 0.0 , 0.0 , 0.0 ,11*0.,
      C 05.03, 02.34, 02.56, 00.00,  0.00,  0.00, 0.0 , 0.0 , 0.0 ,11*0.,
      N  0.01,  0.02,  0.02,  0.00,  0.00,  0.00, 0.0 , 0.0 , 0.0 ,11*0./
C
       END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 06
C
C  Common block array subscripts:
C
C  CRED12(19,20,5,2,2)  -  CRED12 ( BY, AGE1ST, ISTRN, ITECH, IP )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /IMCR12/:
C
C  CRED12   R    I/M credit percentages for technologies 1 and 2
C
C  Local array subscripts:
C
C  R<I><J><K><L>(19,10)  -  R<I><J><K><L> ( BY, AGE1ST )
C
C  where I = 1,2;  J = ISTRN;  K = ITECH;  L = IP
C
C  Local array dictionary:
C
C  The local arrays are all technology 1 & 2 I/M credit percentages.  Their
C  names follow the IJKL syntax described for the subscripts.  Note that:
C
C  R<I><J><K><L>(1,1) EQU to CRED12(1,1,<J>,<K>,<L>), if I=1
C                            CRED12(1,11,<J>,<K>,<L>), if I=2
C
C  Notes:
C
C  /IMCRED/ was split into /IMCR12/ and /IMCR4P/.  IRED was replaced by CRED12
C  and assigned to /IMCR12/.  ITECH4 was replaced by CRED4P and assigned to
C  /IMCR4P/.  The sheer length of the data blocks initializing the 2 arrays
C  otherwise would exceed the 1000 integral numbered section assigned to this
C  subprogram.  /IMCR4P/ is now initialized in a separate BLOCK DATA 07.  The
C  old subsequent BLOCK DATA subprograms (07,08,...) have been renumbered
C  up by a 1000 and their BD id upped by 1.
C
C  CRED12 and CRED4P are real percentages (F4.3), while their predecessors
C  were integer percents (I2).
C
      COMMON /IMCR12/ CRED12(19,20,5,2,2)
C
      DIMENSION
     *R1111(19,10),R2111(19,10),R1211(19,10),R2211(19,10),
     *R1311(19,10),R2311(19,10),R1411(19,10),R2411(19,10),
     *R1511(19,10),R2511(19,10),
     *R1121(19,10),R2121(19,10),R1221(19,10),R2221(19,10),
     *R1321(19,10),R2321(19,10),R1421(19,10),R2421(19,10),
     *R1521(19,10),R2521(19,10),
     *R1112(19,10),R2112(19,10),R1212(19,10),R2212(19,10),
     *R1312(19,10),R2312(19,10),R1412(19,10),R2412(19,10),
     *R1512(19,10),R2512(19,10),
     *R1122(19,10),R2122(19,10),R1222(19,10),R2222(19,10),
     *R1322(19,10),R2322(19,10),R1422(19,10),R2422(19,10),
     *R1522(19,10),R2522(19,10)
```

```
C
      EQUIVALENCE
     *(CRED12(1,1,1,1,1),R1111(1,1)),(CRED12(1,11,1,1,1),R2111(1,1)),
     *(CRED12(1,1,2,1,1),R1211(1,1)),(CRED12(1,11,2,1,1),R2211(1,1)),
     *(CRED12(1,1,3,1,1),R1311(1,1)),(CRED12(1,11,3,1,1),R2311(1,1)),
     *(CRED12(1,1,4,1,1),R1411(1,1)),(CRED12(1,11,4,1,1),R2411(1,1)),
     *(CRED12(1,1,5,1,1),R1511(1,1)),(CRED12(1,11,5,1,1),R2511(1,1)),
     *(CRED12(1,1,1,2,1),R1121(1,1)),(CRED12(1,11,1,2,1),R2121(1,1)),
     *(CRED12(1,1,2,2,1),R1221(1,1)),(CRED12(1,11,2,2,1),R2221(1,1)),
     *(CRED12(1,1,3,2,1),R1321(1,1)),(CRED12(1,11,3,2,1),R2321(1,1)),
     *(CRED12(1,1,4,2,1),R1421(1,1)),(CRED12(1,11,4,2,1),R2421(1,1)),
     *(CRED12(1,1,5,2,1),R1521(1,1)),(CRED12(1,11,5,2,1),R2521(1,1)),
     *(CRED12(1,1,1,1,2),R1112(1,1)),(CRED12(1,11,1,1,2),R2112(1,1)),
     *(CRED12(1,1,2,1,2),R1212(1,1)),(CRED12(1,11,2,1,2),R2212(1,1)),
     *(CRED12(1,1,3,1,2),R1312(1,1)),(CRED12(1,11,3,1,2),R2312(1,1)),
     *(CRED12(1,1,4,1,2),R1412(1,1)),(CRED12(1,11,4,1,2),R2412(1,1)),
     *(CRED12(1,1,5,1,2),R1512(1,1)),(CRED12(1,11,5,1,2),R2512(1,1)),
     *(CRED12(1,1,1,2,2),R1122(1,1)),(CRED12(1,11,1,2,2),R2122(1,1)),
     *(CRED12(1,1,2,2,2),R1222(1,1)),(CRED12(1,11,2,2,2),R2222(1,1)),
     *(CRED12(1,1,3,2,2),R1322(1,1)),(CRED12(1,11,3,2,2),R2322(1,1)),
     *(CRED12(1,1,4,2,2),R1422(1,1)),(CRED12(1,11,4,2,2),R2422(1,1))
      EQUIVALENCE
     *(CRED12(1,1,5,2,2),R1522(1,1)),(CRED12(1,11,5,2,2),R2522(1,1))
C
C       Inspection / maintenance reduction percentages for technologies 1
C       through 2:
C
      DATA R1111/.028,.055,.050,.059,.066,.072,.077,.083,.089,.095,
     *           .104,.115,.128,.141,.156,.171,.185,.199,.213,
     *           .064,.049,.058,.065,.071,.075,.080,.087,.092,.102,
     *           .114,.126,.140,.154,.169,.183,.197,.210,.085,
     *           .065,.052,.061,.066,.070,.076,.080,.086,.092,.105,
     *           .120,.133,.147,.161,.175,.189,.202,.189,.082,
     *           .066,.055,.065,.066,.069,.076,.080,.086,.096,.109,
     *           .122,.134,.148,.162,.176,.191,.199,.179,.079,
     *           .068,.062,.069,.070,.071,.076,.084,.094,.104,.117,
     *           .129,.140,.153,.166,.180,.173,.185,.169,.075,
     *           .070,.067,.074,.073,.071,.076,.089,.100,.112,.125,
     *           .137,.148,.160,.172,.152,.160,.172,.157,.072,
     *           .072,.072,.078,.074,.075,.083,.095,.105,.118,.131,
     *           .143,.153,.165,.144,.141,.147,.158,.145,.068,
     *           .073,.077,.082,.078,.083,.092,.102,.112,.124,.135,
     *           .146,.158,.143,.134,.130,.136,.146,.134,.065,
     *           .074,.081,.089,.087,.093,.100,.109,.119,.130,.142,
     *           .153,.145,.134,.125,.120,.125,.134,.124,.061,
     *           .075,.088,.100,.097,.102,.109,.117,.127,.138,.149,
     *           .149,.137,.125,.116,.110,.114,.122,.114,.057/
      DATA R2111/.078,.098,.112,.107,.111,.118,.125,.135,.145,.153,
     *           .141,.130,.117,.107,.102,.104,.109,.104,.054,
     *           .083,.109,.123,.118,.119,.125,.133,.143,.156,.145,
     *           .133,.121,.110,.099,.094,.094,.099,.097,.052,
     *           .088,.120,.135,.129,.127,.133,.141,.159,.148,.137,
     *           .125,.113,.102,.092,.086,.085,.093,.094,.051,
     *           .092,.131,.148,.140,.138,.143,.164,.152,.140,.129,
     *           .117,.106,.095,.085,.078,.080,.090,.090,.049,
     *           .097,.143,.160,.151,.148,.168,.157,.144,.133,.121,
     *           .109,.098,.088,.079,.075,.079,.087,.086,.047,
     *           .101,.154,.174,.161,.174,.162,.150,.138,.126,.114,
```

```
     *          .103,.092,.083,.075,.074,.077,.083,.082,.045,
     *          .105,.165,.187,.181,.168,.156,.144,.132,.119,.108,
     *          .096,.087,.081,.076,.074,.075,.079,.076,.043,
     *          .109,.175,.187,.173,.160,.148,.136,.124,.112,.101,
     *          .090,.084,.081,.076,.073,.072,.075,.071,.041,
     *          .112,.192,.180,.166,.153,.140,.128,.117,.104,.095,
     *          .088,.085,.081,.075,.071,.069,.070,.067,.038,
     *          .195,.182,.168,.155,.142,.130,.118,.106,.096,.089,
     *          .086,.082,.077,.072,.069,.068,.066,.049,.017/
      DATA R1211/.033,.074,.078,.084,.088,.095,.102,.108,.114,.118,
     *          .126,.140,.155,.170,.185,.200,.215,.231,.247,
     *          .075,.079,.085,.088,.093,.101,.106,.113,.117,.125,
     *          .138,.154,.169,.183,.198,.213,.228,.244,.162,
     *          .079,.087,.091,.092,.097,.103,.108,.115,.122,.135,
     *          .149,.165,.180,.194,.209,.224,.239,.250,.156,
     *          .084,.093,.096,.096,.100,.105,.111,.120,.132,.147,
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*          .473,.461,.449,.437,.423,.408,.389,.355,.283/
 DATA R2521/.274,.344,.375,.395,.410,.422,.433,.443,.454,.471,
*          .460,.449,.437,.425,.411,.397,.377,.344,.276,
*          .280,.353,.386,.405,.419,.431,.442,.453,.468,.458,
*          .447,.436,.425,.413,.399,.383,.363,.334,.268,
*          .287,.363,.397,.416,.430,.443,.454,.466,.456,.445,
*          .434,.423,.412,.399,.386,.369,.349,.323,.261,
*          .293,.372,.407,.426,.440,.453,.463,.453,.444,.434,
*          .423,.411,.399,.386,.371,.355,.337,.310,.253,
*          .299,.381,.415,.435,.451,.462,.453,.444,.433,.422,
*          .412,.399,.386,.372,.357,.341,.324,.298,.243,
*          .303,.389,.424,.444,.461,.452,.443,.434,.423,.412,
*          .400,.388,.374,.359,.345,.330,.312,.286,.233,
*          .308,.397,.433,.461,.452,.442,.433,.423,.411,.400,
*          .388,.375,.362,.347,.333,.318,.300,.275,.223,
*          .313,.403,.461,.453,.443,.433,.423,.412,.400,.389,
*          .376,.363,.349,.335,.320,.306,.289,.266,.215,
*          .317,.460,.452,.442,.433,.423,.412,.400,.388,.376,
*          .364,.351,.339,.325,.311,.297,.282,.259,.209,
*          .460,.451,.442,.433,.423,.412,.400,.388,.376,.364,
*          .351,.340,.326,.313,.299,.284,.264,.224,.074/
 DATA R1112/.013,.065,.132,.183,.222,.256,.287,.315,.342,.369,
*          .393,.414,.434,.453,.472,.490,.506,.521,.535,
*          .045,.121,.177,.219,.254,.284,.312,.340,.366,.390,
*          .412,.432,.451,.470,.487,.504,.518,.532,.123,
*          .046,.134,.196,.240,.273,.302,.328,.354,.378,.401,
*          .422,.442,.460,.477,.493,.508,.522,.371,.122,
*          .044,.142,.211,.255,.288,.316,.341,.364,.386,.407,
*          .427,.445,.462,.479,.493,.508,.487,.367,.120,
*          .048,.156,.230,.275,.307,.334,.358,.379,.399,.418,
*          .436,.453,.469,.484,.499,.521,.478,.361,.119,
*          .050,.169,.248,.294,.324,.349,.372,.393,.412,.430,
*          .447,.463,.478,.492,.527,.512,.470,.354,.118,
*          .053,.182,.266,.311,.341,.365,.386,.405,.424,.441,
*          .457,.472,.486,.529,.518,.502,.460,.346,.116,
*          .055,.194,.282,.327,.356,.379,.399,.418,.435,.450,
*          .465,.480,.530,.519,.509,.493,.451,.339,.115,
*          .057,.204,.296,.341,.371,.392,.411,.428,.444,.459,
*          .474,.534,.522,.510,.498,.484,.442,.331,.113,
*          .059,.215,.311,.356,.385,.405,.423,.440,.455,.470,
*          .537,.524,.510,.498,.487,.472,.431,.323,.111/
 DATA R2112/.060,.224,.324,.370,.398,.418,.435,.451,.466,.543,
*          .529,.516,.501,.488,.476,.460,.418,.314,.109,
*          .061,.233,.336,.382,.409,.429,.446,.461,.550,.536,
*          .522,.506,.491,.478,.466,.448,.406,.304,.106,
*          .063,.242,.347,.393,.420,.440,.456,.556,.543,.529,
*          .514,.498,.482,.467,.453,.434,.393,.293,.104,
*          .064,.252,.359,.405,.432,.451,.561,.548,.535,.521,
*          .506,.489,.472,.455,.439,.419,.379,.283,.100,
*          .065,.260,.370,.416,.443,.567,.555,.541,.527,.512,
*          .495,.477,.459,.441,.423,.403,.364,.272,.096,
*          .067,.269,.381,.427,.577,.564,.551,.536,.521,.506,
*          .489,.469,.448,.427,.408,.387,.348,.259,.093,
*          .068,.276,.392,.586,.574,.560,.547,.531,.515,.497,
*          .480,.459,.437,.414,.392,.368,.329,.245,.090,
*          .069,.283,.594,.581,.568,.554,.540,.524,.507,.489,
*          .469,.447,.424,.399,.374,.349,.308,.228,.086,
*          .070,.599,.587,.574,.560,.546,.530,.514,.496,.478,
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*          .457,.434,.409,.382,.356,.327,.286,.210,.080,
*          .601,.588,.575,.562,.547,.532,.515,.498,.480,.459,
*          .437,.412,.385,.358,.329,.292,.226,.115,.023/
 DATA R1212/.025,.109,.189,.242,.280,.312,.342,.371,.399,.424,
*          .446,.466,.486,.504,.520,.535,.549,.562,.574,
*          .084,.179,.238,.278,.309,.340,.369,.397,.423,.444,
*          .465,.485,.502,.518,.533,.548,.560,.573,.250,
*          .089,.199,.264,.303,.332,.361,.388,.415,.439,.459,
*          .479,.497,.513,.527,.542,.555,.567,.493,.248,
*          .093,.219,.289,.327,.355,.380,.406,.431,.452,.471,
*          .490,.507,.523,.536,.549,.562,.579,.488,.246,
*          .096,.237,.313,.350,.374,.396,.420,.443,.462,.481,
*          .498,.515,.530,.543,.556,.597,.571,.481,.241,
*          .096,.252,.333,.367,.387,.407,.429,.451,.470,.487,
*          .503,.519,.534,.547,.600,.588,.563,.475,.239,
*          .100,.273,.358,.390,.407,.423,.442,.462,.481,.498,
*          .513,.528,.542,.601,.590,.579,.554,.467,.236,
*          .103,.288,.377,.409,.424,.439,.456,.474,.492,.508,
*          .523,.536,.602,.591,.580,.569,.544,.459,.233,
*          .106,.302,.396,.427,.440,.454,.470,.486,.502,.517,
*          .532,.603,.592,.580,.569,.558,.534,.450,.227,
*          .109,.314,.412,.442,.455,.468,.483,.498,.513,.526,
*          .605,.594,.582,.569,.558,.546,.523,.441,.222/
 DATA R2212/.111,.327,.427,.457,.469,.481,.494,.508,.522,.609,
*          .597,.585,.572,.558,.545,.533,.511,.431,.218,
*          .113,.337,.440,.471,.482,.493,.506,.518,.610,.599,
*          .587,.574,.561,.547,.534,.521,.498,.420,.214,
*          .115,.347,.453,.484,.495,.505,.517,.614,.602,.591,
*          .578,.565,.551,.536,.522,.508,.484,.409,.210,
*          .117,.356,.465,.496,.506,.515,.619,.607,.595,.583,
*          .569,.555,.540,.525,.509,.493,.470,.398,.205,
*          .119,.366,.476,.507,.517,.624,.613,.601,.589,.575,
*          .560,.544,.528,.511,.494,.476,.453,.382,.197,
*          .121,.375,.487,.517,.628,.617,.605,.592,.579,.565,
*          .549,.532,.515,.495,.477,.459,.435,.365,.189,
*          .123,.383,.497,.630,.619,.608,.595,.581,.568,.553,
*          .536,.518,.500,.479,.460,.441,.416,.346,.179,
*          .124,.390,.633,.621,.609,.597,.584,.571,.556,.540,
*          .523,.506,.486,.464,.443,.422,.395,.327,.168,
*          .125,.635,.624,.612,.600,.588,.576,.563,.548,.532,
*          .514,.496,.473,.448,.424,.401,.371,.306,.157,
*          .635,.624,.613,.601,.589,.577,.565,.550,.535,.517,
*          .498,.476,.451,.426,.401,.373,.318,.197,.046/
 DATA R1312/.035,.143,.222,.271,.307,.339,.369,.397,.423,.447,
*          .467,.487,.505,.522,.538,.552,.565,.575,.586,
*          .119,.215,.268,.305,.337,.367,.395,.421,.445,.466,
*          .485,.504,.520,.536,.550,.564,.575,.586,.341,
*          .126,.241,.298,.333,.361,.389,.415,.439,.461,.481,
*          .499,.515,.530,.545,.559,.572,.583,.555,.337,
*          .131,.265,.328,.361,.386,.410,.433,.455,.475,.493,
*          .511,.527,.542,.555,.568,.580,.622,.549,.334,
*          .137,.287,.355,.386,.407,.428,.449,.470,.489,.506,
*          .523,.537,.551,.564,.575,.641,.614,.542,.330,
*          .142,.307,.379,.408,.427,.446,.465,.485,.502,.519,
*          .534,.547,.560,.573,.643,.632,.605,.536,.326,
*          .145,.322,.398,.427,.444,.462,.480,.498,.514,.529,
*          .543,.556,.568,.643,.635,.623,.596,.528,.322,
*          .146,.335,.415,.443,.458,.474,.491,.508,.524,.538,
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*          .552,.564,.644,.635,.626,.613,.586,.519,.318,
*          .150,.350,.433,.460,.473,.487,.502,.519,.534,.548,
*          .561,.640,.629,.620,.612,.600,.575,.506,.305,
*          .153,.364,.450,.477,.488,.500,.513,.528,.543,.556,
*          .642,.631,.621,.610,.600,.588,.563,.496,.297/
 DATA R2312/.157,.377,.466,.492,.502,.513,.525,.539,.552,.647,
*          .637,.626,.615,.603,.592,.578,.553,.489,.298,
*          .160,.388,.479,.505,.515,.525,.537,.550,.650,.640,
*          .629,.618,.605,.593,.580,.565,.541,.479,.293,
*          .164,.400,.493,.518,.527,.536,.547,.650,.640,.630,
*          .619,.607,.594,.581,.567,.551,.527,.467,.286,
*          .166,.409,.504,.530,.538,.547,.651,.640,.630,.620,
*          .608,.596,.582,.568,.553,.538,.513,.454,.278,
*          .168,.418,.515,.541,.549,.652,.643,.633,.622,.610,
*          .598,.584,.571,.555,.539,.523,.497,.438,.268,
*          .170,.427,.525,.551,.653,.644,.633,.622,.611,.599,
*          .586,.572,.557,.542,.524,.506,.480,.422,.259,
*          .173,.435,.535,.653,.643,.633,.623,.611,.599,.586,
*          .572,.558,.543,.526,.508,.488,.462,.405,.249,
*          .175,.444,.652,.642,.632,.622,.611,.599,.586,.573,
*          .559,.544,.528,.510,.489,.468,.442,.386,.237,
*          .178,.651,.642,.632,.621,.610,.598,.586,.573,.559,
*          .545,.529,.512,.492,.469,.445,.419,.367,.227,
*          .651,.641,.631,.621,.610,.598,.586,.573,.559,.545,
*          .529,.512,.492,.469,.445,.419,.376,.265,.067/
 DATA R1412/.044,.175,.252,.295,.327,.357,.384,.408,.431,.452,
*          .474,.493,.511,.527,.542,.556,.569,.582,.593,
*          .151,.245,.294,.326,.357,.384,.408,.431,.452,.473,
*          .493,.511,.527,.542,.556,.569,.582,.593,.396,
*          .160,.269,.322,.355,.384,.409,.431,.452,.473,.492,
*          .510,.526,.541,.555,.568,.581,.592,.578,.392,
*          .169,.293,.351,.383,.408,.430,.451,.471,.490,.508,
*          .525,.540,.554,.567,.579,.591,.631,.571,.388,
*          .177,.314,.375,.407,.429,.450,.469,.489,.507,.524,
*          .539,.553,.566,.577,.589,.646,.623,.564,.384,
*          .181,.333,.398,.429,.448,.467,.485,.503,.520,.535,
*          .549,.562,.574,.585,.650,.637,.615,.556,.379,
*          .186,.352,.420,.448,.465,.482,.499,.515,.530,.544,
*          .558,.571,.583,.651,.640,.628,.605,.548,.374,
*          .191,.370,.441,.466,.480,.496,.512,.528,.542,.556,
*          .569,.581,.651,.641,.631,.618,.596,.540,.368,
*          .196,.386,.459,.483,.496,.510,.525,.540,.554,.567,
*          .579,.650,.641,.632,.621,.607,.585,.530,.362,
*          .201,.401,.477,.499,.511,.524,.538,.551,.564,.576,
*          .650,.641,.632,.621,.610,.595,.574,.519,.356/
 DATA R2412/.205,.415,.492,.514,.525,.537,.550,.562,.574,.650,
*          .641,.631,.621,.610,.598,.583,.562,.508,.349,
*          .209,.429,.506,.528,.538,.548,.560,.572,.649,.640,
*          .630,.620,.610,.598,.585,.570,.550,.496,.341,
*          .213,.442,.520,.541,.549,.559,.570,.648,.638,.629,
*          .619,.609,.597,.585,.573,.557,.536,.484,.332,
*          .216,.454,.533,.553,.561,.570,.646,.637,.628,.618,
*          .607,.596,.585,.572,.559,.543,.522,.471,.323,
*          .219,.465,.545,.564,.572,.646,.637,.627,.617,.607,
*          .596,.585,.573,.559,.545,.528,.506,.456,.312,
*          .223,.475,.556,.574,.645,.636,.626,.617,.607,.596,
*          .585,.573,.560,.545,.529,.512,.488,.439,.301,
*          .226,.483,.565,.644,.635,.626,.617,.607,.596,.585,
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     *          .572,.559,.545,.529,.513,.495,.470,.423,.290,
     *          .228,.491,.643,.635,.626,.616,.606,.595,.584,.572,
     *          .559,.544,.529,.513,.496,.477,.451,.405,.279,
     *          .231,.641,.633,.625,.615,.605,.594,.583,.571,.558,
     *          .544,.529,.512,.496,.478,.457,.431,.386,.266,
     *          .641,.633,.624,.614,.604,.594,.582,.571,.558,.544,
     *          .529,.513,.496,.478,.458,.432,.393,.297,.078/
      DATA R1512/.052,.196,.265,.303,.332,.359,.385,.410,.432,.452,
     *          .471,.490,.507,.523,.538,.552,.565,.577,.588,
     *          .176,.260,.303,.332,.359,.385,.410,.433,.453,.472,
     *          .490,.507,.524,.539,.552,.565,.577,.588,.427,
     *          .188,.285,.330,.359,.384,.409,.433,.455,.475,.493,
     *          .509,.525,.540,.553,.566,.579,.590,.587,.422,
     *          .198,.310,.358,.386,.410,.432,.454,.475,.494,.511,
     *          .526,.540,.554,.568,.580,.591,.625,.580,.417,
     *          .207,.332,.385,.411,.432,.453,.474,.493,.511,.528,
     *          .543,.556,.569,.581,.591,.636,.618,.573,.412,
     *          .215,.353,.409,.435,.454,.474,.492,.510,.528,.542,
     *          .557,.569,.581,.592,.639,.627,.610,.565,.406,
     *          .221,.374,.432,.457,.476,.493,.510,.526,.542,.556,
     *          .569,.581,.593,.640,.630,.619,.601,.558,.400,
     *          .228,.395,.455,.477,.494,.510,.526,.541,.556,.569,
     *          .581,.592,.639,.630,.621,.609,.591,.549,.393,
     *          .236,.413,.475,.497,.511,.526,.540,.555,.568,.580,
     *          .592,.638,.630,.621,.611,.599,.581,.539,.386,
     *          .242,.429,.492,.514,.527,.541,.554,.567,.579,.591,
     *          .638,.629,.620,.611,.600,.587,.570,.528,.377/
      DATA R2512/.248,.445,.509,.530,.542,.555,.567,.579,.590,.637,
     *          .629,.620,.610,.600,.589,.576,.558,.518,.368,
     *          .254,.459,.524,.545,.556,.567,.578,.589,.632,.624,
     *          .615,.606,.596,.586,.575,.562,.545,.504,.360,
     *          .259,.471,.538,.557,.567,.578,.587,.630,.622,.613,
     *          .604,.595,.585,.574,.562,.549,.531,.491,.351,
     *          .264,.483,.551,.570,.578,.587,.628,.621,.612,.604,
     *          .595,.585,.574,.562,.550,.536,.517,.478,.341,
     *          .268,.494,.563,.581,.589,.628,.620,.612,.603,.594,
     *          .584,.574,.562,.550,.536,.521,.501,.463,.331,
     *          .272,.504,.574,.593,.627,.619,.611,.603,.593,.583,
     *          .573,.561,.549,.536,.522,.506,.485,.447,.320,
     *          .276,.513,.584,.626,.619,.610,.601,.592,.582,.571,
     *          .560,.548,.535,.521,.506,.490,.468,.430,.308,
     *          .280,.522,.624,.617,.609,.599,.589,.579,.569,.557,
     *          .546,.533,.520,.505,.490,.472,.449,.411,.296,
     *          .283,.621,.613,.606,.597,.587,.577,.566,.556,.543,
     *          .530,.517,.503,.488,.473,.454,.430,.390,.282,
     *          .620,.612,.604,.596,.587,.577,.566,.555,.543,.530,
     *          .516,.503,.488,.472,.454,.431,.396,.309,.083/
      DATA R1122/.030,.117,.173,.215,.247,.275,.301,.322,.342,.361,
     *          .378,.395,.410,.424,.437,.450,.462,.473,.484,
     *          .101,.160,.205,.240,.267,.293,.315,.335,.354,.371,
     *          .388,.403,.417,.430,.443,.455,.467,.477,.161,
     *          .102,.158,.201,.235,.262,.285,.306,.326,.343,.359,
     *          .374,.389,.402,.415,.427,.439,.450,.224,.160,
     *          .097,.151,.191,.222,.248,.271,.291,.310,.327,.344,
     *          .360,.374,.387,.399,.411,.422,.266,.224,.160,
     *          .098,.152,.190,.222,.248,.270,.289,.306,.323,.338,
     *          .353,.368,.381,.393,.406,.296,.265,.225,.159,
     *          .095,.147,.185,.217,.242,.264,.283,.302,.318,.333,
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*          .347,.361,.374,.386,.309,.284,.253,.212,.148,
*          .093,.145,.184,.214,.240,.261,.282,.299,.315,.330,
*          .344,.357,.369,.335,.314,.290,.260,.219,.154,
*          .091,.144,.182,.213,.237,.259,.279,.296,.311,.326,
*          .339,.352,.341,.322,.300,.274,.244,.205,.144,
*          .091,.144,.182,.212,.237,.258,.277,.294,.309,.324,
*          .337,.351,.334,.316,.295,.270,.239,.199,.139,
*          .090,.142,.182,.213,.237,.258,.276,.293,.308,.321,
*          .368,.352,.335,.316,.295,.272,.242,.199,.139/
 DATA R2122/.090,.142,.182,.212,.236,.256,.273,.290,.304,.390,
*          .374,.358,.339,.320,.298,.274,.242,.200,.138,
*          .089,.143,.182,.211,.233,.252,.269,.284,.409,.396,
*          .381,.364,.345,.326,.302,.277,.244,.201,.139,
*          .092,.146,.186,.214,.238,.257,.274,.434,.419,.404,
*          .387,.369,.350,.329,.306,.278,.244,.200,.138,
*          .100,.155,.196,.227,.252,.270,.459,.444,.428,.410,
*          .392,.373,.352,.330,.307,.279,.245,.201,.140,
*          .095,.150,.192,.220,.243,.479,.466,.451,.435,.418,
*          .401,.382,.360,.336,.310,.281,.247,.203,.141,
*          .103,.158,.200,.230,.503,.489,.473,.458,.441,.423,
*          .405,.386,.365,.341,.313,.283,.248,.204,.143,
*          .103,.159,.200,.520,.507,.493,.478,.463,.446,.429,
*          .409,.387,.363,.338,.312,.280,.243,.199,.140,
*          .104,.160,.547,.534,.521,.508,.493,.476,.459,.441,
*          .422,.401,.377,.352,.322,.289,.252,.203,.143,
*          .104,.572,.561,.547,.534,.520,.504,.488,.470,.452,
*          .433,.412,.389,.364,.334,.299,.256,.204,.137,
*          .578,.567,.554,.540,.527,.511,.495,.477,.459,.441,
*          .420,.397,.374,.345,.311,.269,.218,.154,.041/
 DATA R1222/.051,.192,.262,.303,.330,.353,.372,.391,.408,.423,
*          .437,.450,.462,.474,.485,.495,.505,.515,.525,
*          .168,.250,.295,.324,.348,.368,.386,.403,.418,.433,
*          .446,.458,.470,.481,.492,.502,.512,.521,.279,
*          .170,.251,.298,.328,.351,.371,.388,.403,.418,.432,
*          .445,.456,.468,.478,.489,.499,.509,.356,.278,
*          .171,.252,.299,.330,.354,.374,.390,.405,.420,.433,
*          .445,.456,.467,.477,.488,.498,.400,.354,.276,
*          .169,.247,.291,.321,.344,.365,.384,.400,.415,.428,
*          .440,.452,.463,.474,.484,.431,.397,.353,.275,
*          .169,.241,.284,.315,.338,.357,.373,.390,.406,.419,
*          .431,.443,.454,.465,.454,.428,.395,.352,.273,
*          .170,.239,.282,.313,.336,.354,.370,.384,.398,.410,
*          .422,.434,.445,.471,.451,.426,.395,.350,.271,
*          .171,.241,.283,.314,.337,.355,.371,.385,.398,.411,
*          .422,.433,.477,.459,.437,.411,.380,.337,.263,
*          .172,.244,.289,.320,.342,.359,.375,.389,.402,.414,
*          .425,.495,.480,.461,.441,.417,.386,.342,.268,
*          .171,.244,.290,.319,.341,.358,.373,.387,.400,.413,
*          .504,.489,.471,.453,.432,.409,.379,.334,.262/
 DATA R2222/.173,.247,.293,.321,.343,.362,.378,.392,.406,.512,
*          .497,.482,.465,.447,.427,.404,.373,.331,.257,
*          .176,.252,.298,.328,.350,.369,.385,.399,.523,.510,
*          .497,.482,.466,.448,.428,.403,.373,.331,.257,
*          .173,.247,.290,.321,.345,.364,.381,.529,.517,.503,
*          .489,.475,.459,.441,.419,.395,.364,.323,.251,
*          .176,.254,.302,.333,.357,.375,.542,.530,.518,.504,
*          .489,.474,.456,.437,.416,.392,.362,.319,.248,
*          .176,.254,.300,.333,.357,.560,.548,.535,.522,.508,
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     *          .492,.476,.459,.440,.418,.394,.362,.318,.246,
     *          .177,.254,.300,.334,.582,.570,.558,.544,.530,.515,
     *          .498,.482,.464,.444,.422,.397,.365,.319,.245,
     *          .178,.255,.302,.600,.589,.578,.565,.553,.540,.525,
     *          .509,.490,.472,.451,.428,.401,.369,.325,.245,
     *          .178,.257,.620,.609,.599,.587,.575,.561,.547,.531,
     *          .514,.497,.479,.458,.434,.406,.373,.326,.240,
     *          .179,.638,.628,.617,.605,.592,.578,.563,.549,.533,
     *          .516,.498,.479,.458,.434,.408,.376,.327,.235,
     *          .643,.633,.622,.610,.596,.582,.567,.553,.538,.521,
     *          .503,.483,.463,.440,.415,.386,.342,.261,.071/
      DATA R1322/.066,.242,.313,.354,.380,.400,.417,.431,.445,.458,
     *          .469,.480,.490,.500,.509,.518,.527,.536,.544,
     *          .217,.300,.346,.375,.396,.414,.429,.443,.456,.467,
     *          .479,.489,.499,.508,.517,.526,.535,.543,.354,
     *          .212,.300,.346,.376,.399,.416,.432,.446,.459,.471,
     *          .481,.492,.501,.511,.520,.529,.538,.465,.353,
     *          .209,.300,.349,.378,.400,.418,.433,.448,.460,.472,
     *          .483,.493,.503,.513,.522,.532,.514,.464,.353,
     *          .212,.306,.356,.385,.407,.425,.440,.454,.466,.479,
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     *          .213,.307,.357,.388,.410,.427,.442,.455,.467,.479,
     *          .489,.500,.509,.519,.558,.538,.508,.458,.349,
     *          .217,.314,.366,.396,.418,.434,.449,.462,.474,.485,
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     *          .217,.316,.368,.399,.421,.438,.452,.465,.476,.487,
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     *          .500,.576,.564,.549,.532,.511,.483,.435,.335,
     *          .217,.319,.372,.405,.429,.447,.460,.473,.484,.494,
     *          .586,.574,.561,.546,.529,.510,.480,.432;.332/
      DATA R2322/.217,.319,.373,.409,.432,.450,.463,.476,.487,.595,
     *          .583,.572,.560,.544,.528,.508,.480,.430,.329,
     *          .218,.318,.376,.411,.435,.453,.467,.479,.606,.595,
     *          .584,.572,.559,.544,.528,.506,.476,.427,.325,
     *          .220,.324,.382,.418,.442,.460,.474,.618,.608,.596,
     *          .585,.572,.558,.542,.523,.501,.472,.426,.324,
     *          .226,.333,.391,.427,.453,.471,.630,.620,.609,.597,
     *          .584,.570,.554,.537,.518,.496,.467,.422,.322,
     *          .226,.334,.394,.431,.457,.635,.626,.615,.603,.589,
     *          .576,.560,.544,.528,.509,.486,.458,.413,.313,
     *          .227,.337,.398,.436,.646,.636,.625,.613,.601,.589,
     *          .574,.559,.544,.526,.506,.482,.454,.409,.311,
     *          .229,.339,.401,.651,.641,.629,.618,.606,.593,.581,
     *          .567,.552,.536,.518,.497,.473,.445,.399,.303,
     *          .228,.339,.654,.644,.633,.621,.610,.599,.586,.573,
     *          .560,.545,.530,.513,.493,.471,.441,.396,.300,
     *          .228,.649,.639,.629,.619,.607,.596,.585,.572,.559,
     *          .547,.534,.520,.504,.486,.465,.436,.391,.297,
     *          .647,.637,.627,.617,.606,.595,.584,.571,.558,.546,
     *          .534,.521,.505,.488,.468,.442,.402,.324,.090/
      DATA R1422/.081,.293,.365,.400,.421,.437,.451,.463,.474,.484,
     *          .494,.505,.514,.522,.530,.537,.544,.550,.556,
     *          .267,.355,.395,.418,.435,.449,.461,.473,.483,.494,
     *          .503,.513,.521,.529,.536,.543,.549,.555,.387,
     *          .264,.357,.400,.423,.441,.454,.466,.479,.489,.499,
     *          .508,.517,.524,.532,.539,.546,.553,.524,.385,
     *          .258,.355,.402,.427,.445,.459,.471,.482,.493,.502,
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*          .512,.520,.528,.535,.543,.551,.580,.518,.383,
*          .255,.354,.403,.431,.449,.463,.475,.485,.495,.504,
*          .513,.522,.531,.539,.547,.612,.577,.514,.380,
*          .252,.356,.404,.432,.451,.465,.477,.488,.498,.508,
*          .517,.526,.534,.543,.629,.606,.573,.511,.377,
*          .249,.355,.405,.435,.455,.470,.482,.493,.504,.514,
*          .523,.531,.540,.639,.623,.600,.568,.506,.375,
*          .249,.356,.409,.440,.461,.476,.488,.500,.510,.520,
*          .529,.537,.644,.631,.615,.594,.563,.503,.372,
*          .249,.357,.413,.445,.465,.481,.494,.505,.515,.525,
*          .535,.647,.635,.621,.605,.584,.553,.495,.370,
*          .251,.361,.419,.450,.470,.487,.500,.511,.521,.531,
*          .649,.638,.626,.613,.597,.577,.547,.489,.366/
 DATA R2422/.253,.366,.426,.458,.479,.495,.509,.520,.530,.651,
*          .640,.628,.616,.603,.586,.567,.536,.481,.362,
*          .255,.370,.432,.465,.487,.504,.517,.528,.654,.643,
*          .632,.621,.609,.596,.579,.559,.529,.473,.357,
*          .258,.376,.438,.473,.495,.512,.525,.657,.646,.634,
*          .623,.612,.599,.585,.569,.549,.519,.467,.352,
*          .259,.378,.442,.478,.501,.518,.654,.643,.632,.621,
*          .610,.598,.586,.572,.557,.537,.509,.459,.347,
*          .260,.381,.445,.483,.506,.650,.639,.629,.618,.607,
*          .595,.583,.571,.557,.544,.526,.498,.451,.342,
*          .261,.384,.448,.487,.643,.635,.624,.613,.602,.590,
*          .579,.568,.557,.543,.530,.513,.489,.445,.337,
*          .261,.386,.453,.635,.625,.616,.606,.596,.587,.576,
*          .565,.554,.544,.533,.520,.504,.480,.436,.332,
*          .262,.389,.623,.614,.605,.596,.587,.580,.571,.561,
*          .551,.541,.531,.520,.508,.492,.471,.431,.331,
*          .263,.607,.600,.592,.584,.577,.569,.562,.554,.545,
*          .536,.527,.517,.507,.497,.484,.464,.428,.332,
*          .603,.596,.588,.580,.573,.566,.559,.551,.543,.535,
*          .526,.516,.506,.497,.485,.468,.437,.360,.101/
 DATA R1522/.091,.322,.387,.416,.434,.448,.461,.474,.485,.495,
*          .505,.514,.523,.531,.539,.547,.554,.561,.567,
*          .301,.381,.415,.434,.449,.462,.474,.485,.495,.505,
*          .514,.523,.532,.539,.547,.554,.561,.567,.396,
*          .308,.394,.428,.448,.462,.474,.485,.495,.505,.514,
*          .523,.531,.540,.547,.555,.561,.568,.531,.392,
*          .311,.402,.438,.458,.472,.483,.493,.504,.513,.522,
*          .530,.538,.545,.553,.560,.566,.587,.527,.389,
*          .312,.407,.446,.467,.481,.491,.501,.511,.519,.528,
*          .535,.543,.550,.557,.563,.613,.580,.522,.386,
*          .313,.413,.453,.474,.488,.498,.508,.518,.526,.534,
*          .542,.549,.555,.561,.626,.605,.573,.517,.383,
*          .314,.419,.458,.480,.494,.504,.514,.524,.531,.539,
*          .546,.553,.559,.631,.616,.596,.566,.513,.380,
*          .316,.422,.464,.486,.501,.512,.521,.529,.537,.544,
*          .550,.556,.632,.619,.604,.586,.558,.505,.377,
*          .316,.424,.468,.492,.507,.518,.526,.534,.541,.548,
*          .554,.629,.619,.607,.595,.577,.549,.497,.373,
*          .316,.427,.474,.499,.513,.524,.532,.539,.546,.552,
*          .621,.611,.602,.592,.581,.565,.540,.488,.370/
 DATA R2522/.315,.428,.477,.503,.518,.529,.537,.545,.552,.615,
*          .607,.598,.589,.580,.570,.555,.531,.480,.365,
*          .308,.424,.477,.505,.521,.533,.542,.550,.609,.602,
*          .595,.587,.579,.570,.559,.545,.520,.474,.362,
*          .310,.427,.481,.509,.526,.538,.548,.604,.596,.589,
```

```
     *          .581,.574,.567,.558,.548,.533,.510,.468,.360,
     *          .310,.430,.485,.514,.531,.543,.600,.593,.586,.579,
     *          .572,.564,.556,.547,.536,.522,.501,.461,.356,
     *          .311,.432,.488,.518,.536,.598,.592,.586,.578,.571,
     *          .564,.555,.546,.536,.526,.512,.493,.457,.355,
     *          .312,.434,.491,.521,.598,.592,.586,.579,.572,.564,
     *          .556,.547,.538,.528,.519,.507,.490,.453,.356,
     *          .312,.437,.495,.598,.592,.585,.579,.572,.565,.557,
     *          .548,.540,.531,.523,.514,.504,.488,.453,.359,
     *          .313,.439,.598,.592,.586,.580,.573,.566,.559,.552,
     *          .543,.534,.525,.518,.510,.500,.485,.454,.364,
     *          .313,.597,.591,.585,.580,.573,.566,.559,.551,.543,
     *          .536,.528,.520,.513,.505,.497,.485,.456,.370,
     *          .597,.591,.585,.579,.573,.566,.558,.551,.543,.535,
     *          .528,.521,.513,.506,.498,.488,.465,.398,.113/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 07
C
C  Common block array subscripts:
C
C  CRED4P(19,2,7,3,3)  -  CRED4P ( IBY, IP, ITECH-3, ICUTS, ITEST )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /IMCR4P/:
C
C  CRED4P   R    I/M credit percentages for technologies 4 - 10 (4+ or 4P)
C
C  Local array subscripts:
C
C  C4<I><J>(19,2,4)  -  C4<I><J> ( IBY, IP, ITECHA )
C  C8<I><J>(19,2,3)  -  C8<I><J> ( IBY, IP, ITECHB )
C
C  where I = ICUTS = 1,2,3;  J = ITEST = 1,2,3
C        ITECHA = technologies 4 - 7;  ITECHB = technologies 8 - 10
C
C  Local array dictionary:
C
C  The local arrays are all technology 4+ I/M credit percentages.  Their
C  names follow the IJ syntax described for the subscripts.  Note that:
C
C  C4<I><J>(1,1,1) EQU to CRED4P(1,1,1,<I>,<J>)  (technologies 4 through 7)
C  C8<I><J>(1,1,1) EQU to CRED4P(1,1,5,<I>,<J>)  (technologies 8 through 10)
C
C  Notes:
C
C  MOBILE2 had both credits arrays initialized in 1 BLOCK DATA.  MOBILE3
C  assigns a BLOCK DATA to each, due to their size.
C
C
      COMMON /IMCR4P/ CRED4P(19,2,7,3,3)
C
      DIMENSION
     *C411(19,2,4),C811(19,2,3),
     *C421(19,2,4),C821(19,2,3),
     *C431(19,2,4),C831(19,2,3),
     *C412(19,2,4),C812(19,2,3),
     *C422(19,2,4),C822(19,2,3),
     *C432(19,2,4),C832(19,2,3),
     *C413(19,2,4),C813(19,2,3),
     *C423(19,2,4),C823(19,2,3),
     *C433(19,2,4),C833(19,2,3)
C
      EQUIVALENCE
     *(CRED4P(1,1,1,1,1),C411(1,1,1)),(CRED4P(1,1,5,1,1),C811(1,1,1)),
     *(CRED4P(1,1,1,2,1),C421(1,1,1)),(CRED4P(1,1,5,2,1),C821(1,1,1)),
     *(CRED4P(1,1,1,3,1),C431(1,1,1)),(CRED4P(1,1,5,3,1),C831(1,1,1)),
     *(CRED4P(1,1,1,1,2),C412(1,1,1)),(CRED4P(1,1,5,1,2),C812(1,1,1)),
     *(CRED4P(1,1,1,2,2),C422(1,1,1)),(CRED4P(1,1,5,2,2),C822(1,1,1)),
     *(CRED4P(1,1,1,3,2),C432(1,1,1)),(CRED4P(1,1,5,3,2),C832(1,1,1)),
```

```
     *(CRED4P(1,1,1,1,3),C413(1,1,1)),(CRED4P(1,1,5,1,3),C813(1,1,1)),
     *(CRED4P(1,1,1,2,3),C423(1,1,1)),(CRED4P(1,1,5,2,3),C823(1,1,1)),
     *(CRED4P(1,1,1,3,3),C433(1,1,1)),(CRED4P(1,1,5,3,3),C833(1,1,1))
C
C  technologies 4 through 10 credit percentages:
C
      DATA C411/
     *          .027,.105,.173,.225,.266,.315,.355,.384,.405,.421,
     *          .433,.442,.449,.454,.458,.460,.461,.458,.445,
     *          .032,.120,.193,.249,.293,.349,.397,.431,.457,.477,
     *          .494,.507,.517,.526,.532,.537,.539,.537,.520,
     *          .028,.109,.177,.229,.268,.317,.357,.385,.406,.421,
     *          .433,.442,.448,.453,.456,.458,.458,.455,.442,
     *          .041,.142,.219,.275,.318,.375,.422,.455,.480,.499,
     *          .514,.526,.535,.542,.548,.552,.553,.550,.530,
     *          .028,.106,.172,.222,.260,.308,.347,.375,.395,.410,
     *          .422,.430,.437,.441,.445,.447,.447,.444,.432,
     *          .040,.139,.215,.269,.311,.367,.413,.445,.469,.487,
     *          .502,.513,.522,.530,.535,.539,.540,.538,.521,
     *          .030,.113,.181,.232,.271,.319,.358,.385,.405,.420,
     *          .432,.440,.447,.452,.456,.459,.461,.461,.458,
     *          .043,.143,.218,.271,.311,.365,.410,.441,.465,.483,
     *          .497,.508,.517,.525,.531,.536,.540,.542,.538/
      DATA C811/
     *          .027,.101,.162,.207,.242,.287,.324,.351,.370,.384,
     *          .394,.402,.409,.413,.417,.419,.420,.421,.417,
     *          .040,.135,.205,.255,.292,.344,.387,.417,.439,.455,
     *          .468,.478,.487,.493,.499,.503,.506,.507,.503,
     *          .024,.090,.145,.185,.216,.258,.294,.319,.337,.350,
     *          .360,.368,.373,.378,.381,.383,.385,.386,.386,
     *          .037,.126,.191,.237,.270,.319,.359,.387,.408,.423,
     *          .435,.444,.452,.458,.462,.466,.469,.472,.473,
     *          .022,.084,.135,.173,.201,.242,.277,.301,.318,.331,
     *          .341,.348,.353,.357,.360,.362,.364,.365,.364,
     *          .036,.123,.186,.229,.261,.308,.348,.375,.395,.409,
     *          .420,.429,.436,.441,.446,.449,.452,.453,.454/
      DATA C421/
     *          .022,.087,.148,.198,.239,.289,.332,.363,.386,.403,
     *          .416,.427,.434,.440,.444,.447,.447,.445,.432,
     *          .027,.103,.171,.225,.269,.329,.379,.415,.442,.464,
     *          .481,.495,.506,.514,.521,.526,.528,.526,.509,
     *          .023,.089,.150,.199,.239,.290,.333,.363,.386,.403,
     *          .416,.425,.433,.438,.442,.444,.444,.442,.428,
     *          .034,.121,.193,.248,.293,.352,.402,.438,.464,.484,
     *          .500,.513,.523,.530,.536,.540,.541,.538,.518,
     *          .022,.086,.145,.193,.231,.281,.323,.353,.375,.392,
     *          .405,.414,.422,.427,.431,.433,.433,.431,.420,
     *          .034,.119,.189,.242,.285,.344,.393,.428,.453,.473,
     *          .488,.501,.510,.518,.524,.528,.529,.527,.510,
     *          .024,.093,.154,.202,.242,.292,.334,.364,.386,.402,
     *          .415,.425,.433,.439,.443,.447,.449,.450,.447,
     *          .036,.122,.191,.244,.286,.343,.391,.424,.450,.469,
     *          .484,.497,.507,.515,.521,.527,.531,.533,.530/
      DATA C821/
     *          .021,.081,.135,.178,.213,.260,.300,.329,.350,.366,
     *          .378,.387,.394,.400,.404,.407,.409,.410,.407,
     *          .034,.115,.180,.229,.268,.322,.368,.400,.424,.442,
     *          .456,.467,.476,.483,.489,.494,.497,.498,.495,
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```
     *          .018,.071,.118,.157,.188,.232,.270,.298,.318,.333,
     *          .344,.353,.360,.365,.369,.372,.375,.376,.377,
     *          .031,.107,.167,.212,.247,.298,.341,.372,.394,.411,
     *          .423,.434,.442,.448,.454,.458,.462,.464,.466,
     *          .017,.065,.109,.144,.173,.216,.253,.280,.299,.314,
     *          .325,.333,.340,.345,.349,.351,.354,.355,.355,
     *          .030,.103,.161,.204,.238,.288,.330,.359,.381,.397,
     *          .409,.419,.426,.432,.437,.441,.444,.446,.447/
      DATA C431/
     *          .016,.065,.114,.156,.193,.244,.288,.321,.345,.365,
     *          .380,.391,.401,.408,.413,.416,.418,.416,.405,
     *          .018,.072,.125,.172,.214,.275,.329,.368,.399,.423,
     *          .442,.458,.471,.481,.488,.494,.496,.495,.479,
     *          .016,.066,.114,.155,.191,.242,.287,.319,.344,.363,
     *          .378,.389,.398,.405,.410,.413,.414,.412,.400,
     *          .023,.083,.140,.188,.230,.293,.348,.387,.417,.441,
     *          .459,.474,.486,.495,.502,.506,.508,.505,.487,
     *          .016,.063,.109,.149,.183,.233,.277,.309,.333,.352,
     *          .367,.378,.387,.394,.399,.402,.403,.402,.392,
     *          .023,.081,.136,.183,.224,.286,.339,.378,.407,.430,
     *          .448,.463,.474,.483,.490,.495,.497,.495,.480,
     *          .018,.068,.117,.158,.193,.244,.287,.320,.344,.363,
     *          .378,.390,.399,.407,.413,.418,.421,.423,.422,
     *          .024,.084,.139,.185,.225,.286,.338,.376,.405,.428,
     *          .446,.461,.473,.483,.491,.497,.502,.505,.504/
      DATA C831/
     *          .014,.057,.098,.133,.165,.212,.254,.285,.309,.327,
     *          .341,.352,.361,.368,.374,.378,.381,.383,.382,
     *          .022,.078,.128,.171,.208,.266,.316,.352,.380,.401,
     *          .418,.432,.443,.452,.459,.465,.469,.472,.470,
     *          .012,.048,.083,.113,.141,.185,.225,.255,.277,.295,
     *          .308,.319,.328,.335,.341,.345,.349,.352,.353,
     *          .020,.071,.117,.156,.189,.244,.292,.326,.352,.372,
     *          .388,.400,.411,.419,.426,.432,.437,.441,.443,
     *          .010,.042,.073,.101,.126,.169,.208,.237,.259,.276,
     *          .289,.299,.308,.315,.320,.324,.328,.330,.332,
     *          .019,.068,.112,.149,.181,.234,.280,.314,.339,.358,
     *          .373,.386,.395,.403,.410,.415,.420,.423,.425/
      DATA C412/
     *          .031,.121,.193,.245,.285,.331,.369,.396,.416,.431,
     *          .443,.451,.458,.463,.466,.468,.469,.467,.453,
     *          .042,.152,.230,.283,.323,.376,.419,.451,.475,.494,
     *          .509,.521,.531,.539,.546,.550,.553,.552,.534,
     *          .033,.126,.198,.250,.288,.334,.372,.398,.418,.432,
     *          .443,.451,.457,.462,.465,.467,.467,.464,.450,
     *          .054,.179,.261,.314,.353,.404,.447,.477,.499,.517,
     *          .530,.541,.550,.557,.562,.566,.567,.565,.545,
     *          .033,.123,.193,.243,.280,.325,.362,.388,.407,.421,
     *          .432,.440,.446,.450,.453,.455,.455,.453,.441,
     *          .053,.176,.256,.308,.345,.395,.437,.466,.488,.505,
     *          .518,.529,.537,.544,.549,.552,.554,.552,.535,
     *          .036,.131,.203,.254,.291,.335,.372,.398,.417,.431,
     *          .441,.449,.455,.460,.463,.466,.468,.468,.465,
     *          .056,.181,.259,.309,.344,.393,.433,.462,.483,.499,
     *          .512,.522,.531,.537,.543,.547,.551,.553,.549/
      DATA C812/
     *          .032,.118,.184,.229,.261,.304,.339,.363,.381,.394,
     *          .404,.411,.417,.421,.424,.426,.427,.427,.423,
```

```
     *          .053,.172,.246,.293,.325,.371,.410,.437,.456,.471,
     *          .483,.492,.499,.505,.510,.514,.516,.517,.513,
     *          .029,.107,.166,.206,.235,.275,.308,.331,.348,.360,
     *          .369,.376,.381,.385,.388,.390,.391,.392,.392,
     *          .050,.162,.231,.273,.302,.345,.381,.406,.425,.438,
     *          .449,.457,.463,.468,.472,.476,.478,.480,.481,
     *          .027,.101,.156,.193,.220,.258,.291,.313,.329,.341,
     *          .350,.356,.361,.364,.367,.369,.370,.370,.369,
     *          .048,.158,.224,.265,.292,.334,.370,.394,.411,.424,
     *          .434,.442,.447,.452,.456,.458,.460,.462,.462/
      DATA C422/
     *          .026,.103,.171,.223,.264,.313,.354,.382,.404,.420,
     *          .432,.441,.448,.454,.457,.459,.460,.457,.444,
     *          .036,.134,.210,.265,.308,.362,.408,.441,.466,.486,
     *          .501,.514,.524,.532,.539,.543,.546,.544,.526,
     *          .028,.107,.175,.227,.266,.315,.355,.384,.405,.420,
     *          .432,.441,.447,.452,.456,.457,.457,.455,.441,
     *          .046,.158,.238,.294,.335,.389,.434,.466,.489,.508,
     *          .522,.533,.542,.550,.555,.559,.560,.557,.537,
     *          .027,.104,.170,.220,.258,.306,.346,.374,.394,.409,
     *          .421,.429,.436,.441,.444,.446,.446,.444,.432,
     *          .046,.155,.234,.288,.327,.381,.425,.455,.478,.496,
     *          .510,.521,.530,.537,.542,.545,.547,.545,.527,
     *          .030,.111,.179,.230,.269,.317,.356,.384,.404,.419,
     *          .431,.439,.446,.451,.455,.458,.460,.461,.458,
     *          .049,.160,.237,.289,.327,.379,.421,.451,.474,.491,
     *          .504,.515,.524,.531,.537,.542,.545,.547,.543/
      DATA C822/
     *          .026,.099,.160,.205,.240,.285,.323,.349,.368,.383,
     *          .393,.402,.408,.412,.416,.418,.420,.420,.417,
     *          .046,.151,.224,.273,.308,.357,.398,.426,.447,.463,
     *          .475,.485,.493,.499,.504,.508,.511,.512,.508,
     *          .023,.089,.143,.183,.214,.256,.292,.317,.336,.349,
     *          .359,.367,.373,.377,.380,.383,.384,.386,.386,
     *          .043,.142,.209,.254,.286,.332,.370,.397,.416,.431,
     *          .442,.451,.457,.463,.467,.471,.474,.476,.477,
     *          .022,.082,.133,.171,.199,.240,.275,.299,.317,.330,
     *          .340,.347,.352,.357,.360,.362,.363,.364,.364,
     *          .041,.138,.203,.246,.276,.321,.359,.384,.403,.417,
     *          .427,.435,.442,.447,.451,.454,.456,.458,.458/
      DATA C432/
     *          .020,.080,.138,.187,.227,.278,.321,.353,.376,.394,
     *          .408,.419,.427,.433,.437,.440,.441,.438,.426,
     *          .026,.098,.164,.218,.262,.322,.373,.409,.437,.459,
     *          .477,.490,.502,.511,.518,.522,.524,.522,.505,
     *          .021,.082,.140,.187,.227,.278,.322,.353,.376,.394,
     *          .407,.417,.425,.431,.435,.437,.438,.435,.422,
     *          .033,.115,.185,.240,.284,.345,.396,.432,.459,.479,
     *          .495,.508,.519,.527,.532,.536,.538,.534,.515,
     *          .020,.079,.135,.181,.219,.269,.312,.343,.366,.383,
     *          .396,.406,.414,.420,.424,.426,.427,.425,.414,
     *          .032,.113,.181,.234,.278,.337,.386,.422,.448,.468,
     *          .484,.497,.506,.514,.520,.524,.526,.523,.506,
     *          .022,.086,.143,.191,.229,.280,.322,.353,.376,.394,
     *          .407,.417,.426,.432,.437,.441,.443,.444,.442,
     *          .034,.117,.184,.236,.278,.336,.384,.419,.445,.464,
     *          .480,.493,.503,.511,.518,.524,.528,.530,.527/
      DATA C832/
```

```
     *          .019,.074,.124,.166,.200,.248,.289,.319,.341,.357,
     *          .370,.380,.387,.393,.398,.401,.403,.404,.402,
     *          .032,.109,.172,.221,.260,.315,.362,.395,.419,.437,
     *          .452,.463,.473,.480,.486,.491,.494,.495,.492,
     *          .016,.064,.108,.145,.175,.220,.260,.288,.309,.324,
     *          .336,.346,.353,.359,.363,.367,.369,.371,.372,
     *          .029,.101,.160,.204,.239,.291,.335,.366,.389,.406,
     *          .420,.430,.439,.445,.451,.455,.459,.462,.463,
     *          .015,.058,.099,.132,.160,.204,.242,.270,.290,.305,
     *          .317,.326,.333,.338,.343,.346,.348,.350,.350,
     *          .028,.098,.154,.197,.230,.281,.324,.354,.376,.393,
     *          .405,.415,.423,.429,.434,.438,.441,.444,.444/
      DATA C413/
     *          .035,.133,.206,.258,.295,.340,.377,.403,.423,.437,
     *          .448,.457,.463,.468,.471,.473,.474,.471,.458,
     *          .047,.168,.246,.298,.336,.386,.428,.459,.482,.501,
     *          .515,.527,.537,.545,.551,.556,.558,.557,.540,
     *          .037,.139,.212,.263,.299,.344,.380,.406,.424,.438,
     *          .449,.457,.463,.467,.470,.471,.472,.469,.455,
     *          .061,.199,.280,.330,.366,.415,.456,.485,.507,.523,
     *          .537,.547,.556,.563,.568,.572,.573,.571,.552,
     *          .037,.136,.207,.256,.291,.334,.370,.395,.413,.427,
     *          .437,.445,.451,.455,.458,.459,.459,.457,.445,
     *          .060,.196,.275,.324,.358,.406,.446,.474,.495,.511,
     *          .524,.534,.543,.549,.554,.558,.559,.558,.541,
     *          .040,.145,.218,.267,.302,.345,.380,.405,.423,.436,
     *          .446,.454,.460,.464,.468,.470,.471,.472,.468,
     *          .064,.201,.278,.325,.358,.404,.442,.469,.489,.505,
     *          .517,.527,.536,.542,.548,.552,.555,.557,.553/
      DATA C813/
     *          .036,.132,.198,.242,.273,.313,.347,.370,.387,.400,
     *          .409,.416,.421,.425,.428,.430,.431,.431,.427,
     *          .060,.192,.265,.308,.338,.382,.418,.444,.463,.477,
     *          .488,.497,.504,.510,.514,.518,.520,.521,.517,
     *          .033,.120,.180,.219,.246,.284,.316,.338,.354,.365,
     *          .374,.380,.385,.389,.391,.393,.394,.395,.394,
     *          .057,.181,.248,.288,.314,.355,.390,.414,.431,.444,
     *          .454,.461,.468,.472,.476,.479,.482,.483,.484,
     *          .031,.114,.170,.206,.231,.267,.298,.320,.335,.346,
     *          .354,.360,.365,.368,.370,.372,.373,.373,.372,
     *          .055,.176,.242,.280,.305,.344,.378,.401,.418,.430,
     *          .439,.446,.452,.456,.459,.462,.464,.465,.465/
      DATA C423/
     *          .029,.112,.182,.235,.275,.323,.362,.390,.411,.426,
     *          .438,.447,.454,.459,.462,.464,.465,.462,.449,
     *          .041,.148,.226,.280,.321,.373,.418,.449,.474,.493,
     *          .508,.520,.530,.538,.545,.549,.552,.550,.533,
     *          .031,.116,.187,.239,.278,.325,.364,.392,.412,.427,
     *          .438,.446,.453,.458,.461,.462,.462,.460,.446,
     *          .052,.175,.257,.311,.350,.402,.445,.475,.498,.515,
     *          .529,.540,.549,.556,.561,.565,.566,.564,.544,
     *          .030,.113,.182,.232,.270,.316,.354,.381,.401,.416,
     *          .427,.435,.441,.446,.449,.451,.451,.448,.436,
     *          .052,.172,.252,.304,.342,.393,.435,.464,.486,.503,
     *          .517,.527,.536,.542,.548,.551,.553,.551,.534,
     *          .033,.121,.191,.243,.281,.327,.365,.392,.411,.425,
     *          .436,.445,.451,.456,.460,.462,.464,.465,.461,
     *          .055,.177,.255,.305,.341,.391,.431,.460,.481,.498,
```

```
     *          .511,.521,.529,.536,.542,.547,.550,.552,.548/
      DATA C823/
     *          .029,.109,.172,.218,.251,.295,.332,.357,.375,.389,
     *          .399,.407,.413,.417,.420,.422,.424,.424,.420,
     *          .052,.168,.242,.289,.322,.369,.408,.435,.455,.470,
     *          .482,.491,.498,.504,.509,.513,.515,.516,.512,
     *          .026,.098,.155,.195,.225,.266,.301,.325,.342,.355,
     *          .365,.372,.377,.381,.384,.387,.388,.389,.389,
     *          .048,.158,.227,.270,.299,.343,.380,.405,.423,.437,
     *          .448,.456,.462,.467,.472,.475,.478,.479,.480,
     *          .024,.092,.145,.183,.210,.250,.284,.307,.324,.336,
     *          .345,.352,.357,.361,.364,.365,.367,.367,.367,
     *          .047,.154,.221,.262,.290,.332,.368,.392,.410,.423,
     *          .433,.440,.446,.451,.455,.458,.460,.461,.461/
      DATA C433/
     *          .022,.089,.151,.202,.243,.293,.336,.366,.389,.406,
     *          .419,.429,.437,.443,.447,.449,.449,.447,.434,
     *          .029,.110,.179,.234,.279,.337,.386,.422,.448,.469,
     *          .486,.500,.510,.519,.526,.530,.533,.531,.513,
     *          .023,.092,.154,.204,.244,.294,.337,.367,.389,.406,
     *          .419,.428,.435,.441,.445,.447,.447,.444,.431,
     *          .037,.129,.203,.259,.303,.362,.410,.445,.470,.490,
     *          .506,.518,.528,.535,.541,.545,.546,.543,.523,
     *          .023,.089,.149,.197,.236,.285,.327,.357,.379,.395,
     *          .407,.417,.424,.429,.433,.435,.436,.433,.422,
     *          .036,.126,.199,.253,.296,.353,.401,.435,.460,.479,
     *          .494,.506,.515,.523,.528,.532,.534,.531,.514,
     *          .025,.095,.158,.207,.246,.296,.337,.367,.389,.405,
     *          .418,.428,.435,.441,.445,.449,.451,.452,.449,
     *          .039,.130,.201,.255,.296,.352,.398,.431,.456,.475,
     *          .489,.501,.511,.519,.525,.531,.534,.536,.533/
      DATA C833/
     *          .022,.083,.138,.182,.217,.264,.304,.333,.353,.369,
     *          .381,.390,.397,.402,.406,.409,.411,.411,.409,
     *          .036,.123,.190,.239,.277,.331,.376,.407,.430,.447,
     *          .461,.472,.481,.487,.493,.497,.500,.502,.498,
     *          .019,.073,.122,.161,.192,.236,.274,.301,.321,.336,
     *          .347,.356,.362,.367,.371,.374,.377,.378,.379,
     *          .033,.114,.176,.222,.256,.307,.349,.378,.400,.416,
     *          .428,.438,.446,.452,.457,.461,.465,.467,.468,
     *          .017,.067,.112,.148,.177,.220,.257,.283,.302,.317,
     *          .328,.336,.342,.347,.351,.353,.355,.357,.357,
     *          .032,.110,.171,.214,.247,.296,.337,.366,.387,.402,
     *          .414,.423,.430,.436,.441,.444,.447,.449,.450/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 08
C
C  BLOCK DATA 08 initializes methane offset values.
C
C  Common block array subscripts:
C
C  EXMETH(3,5,8,2)  -  EXMETH ( IB, IEX, IV, IR )
C  MYGEXM(5,8,2)    -  MYGEXM ( IG, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------
C  /BEFGCM/:
C
C  EXMETH   R    methane offset to the basic emission factor
C  MYGEXM   I    the last year of the methane offset model year groups
C
C  Local array subscripts:
C
C  EXMLO1(3,15)  -  EXMLO1 ( IB, IEX/IV )
C  EXMLO2(3,15)  -  EXMLO2 ( IB, IEX/IV )
C  EXMLO3(3,10)  -  EXMLO3 ( IB, IEX/IV )
C  EXMHI1(3,15)  -  EXMHI1 ( IB, IEX/IV )
C  EXMHI2(3,15)  -  EXMHI2 ( IB, IEX/IV )
C  EXMHI3(3,10)  -  EXMHI3 ( IB, IEX/IV )
C  IEXMLO(5,8)   -  IEXMLO ( IG, IV )
C  IEXMHI(5,8)   -  IEXMHI ( IG, IV )
C
C  Local array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------
C  EXMLO1   R    low alt. region methane offset by bag for LDGV, LDGT1, LDGT2
C  EXMLO2   R    low alt. region methane offset by bag for HDGV, LDDV, LDDT
C  EXMLO3   R    low alt. region methane offset by bag for HDDV, MC
C  EXMHI1   R    high alt. region methane offset by bag for LDGV, LDGT1, LDGT2
C  EXMHI2   R    high alt. region methane offset by bag for HDGV, LDDV, LDDT
C  EXMHI3   R    high alt. region methane offset by bag for HDDV, MC
C  IEXMLO   I    last year of model year groups, low altitude region
C  IEXMHI   I    last year of methane offset my groups, high altitude region
C
C  Notes:
C
C  In MOBILE2, methane was a multiplicative factor.
C  The methane offset values were installed in this BLOCK DATA
C  as a subtractive factor in MOBILE3.
C
      COMMON /BEFGCM/ EXMETH(3,5,8,2),MYGEXM(5,8,2)
C
      DIMENSION
     *  EXMLO1(3,15),
     *  EXMLO2(3,15),
     *  EXMLO3(3,10),
     *  EXMHI1(3,15),
     *  EXMHI2(3,15),
```

```
     *   EXMHI3(3,10),
     *   IEXMLO(5,8),
     *   IEXMHI(5,8)
C
      EQUIVALENCE
     *   (EXMETH(1,1,1,1),EXMLO1(1,1)),
     *   (EXMETH(1,1,4,1),EXMLO2(1,1)),
     *   (EXMETH(1,1,7,1),EXMLO3(1,1)),
     *   (EXMETH(1,1,1,2),EXMHI1(1,1)),
     *   (EXMETH(1,1,4,2),EXMHI2(1,1)),
     *   (EXMETH(1,1,7,2),EXMHI3(1,1)),
     *   (MYGEXM(1,1,1),IEXMLO(1,1)),
     *   (MYGEXM(1,1,2),IEXMHI(1,1))
C
C  Methane offset values by bag, by model
C  year group, by vehicle, by region
C
C  Low altitude region
C
C       Bag1   Bag2   Bag3
C
      DATA EXMLO1/
C  LDGV
     * 0.420, 0.310, 0.230,
     * 0.250, 0.160, 0.120,
     * 0.250, 0.160, 0.120,
     * 0.250, 0.160, 0.120,
     * 0.140, 0.090, 0.080,
C  LDGT1
     * 0.420, 0.310, 0.230,
     * 0.290, 0.190, 0.140,
     * 0.260, 0.160, 0.130,
     * 0.170, 0.110, 0.100,
     * 0.000, 0.000, 0.000,
C  LDGT2
     * 0.420, 0.310, 0.230,
     * 0.420, 0.310, 0.230,
     * 0.260, 0.160, 0.130,
     * 0.170, 0.110, 0.100,
     * 0.000, 0.000, 0.000/
      DATA EXMLO2/
C  HDGV
     * 0.670, 0.670, 0.670,
     * 0.310, 0.310, 0.310,
     * 0.180, 0.180, 0.180,
     * 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000,
C  LDDV
     * 0.043, 0.043, 0.043,
     * 0.011, 0.011, 0.011,
     * 0.011, 0.011, 0.011,
     * 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000,
C  LDDT
     * 0.034, 0.034, 0.034,
     * 0.034, 0.034, 0.034,
     * 0.017, 0.017, 0.017,
     * 0.000, 0.000, 0.000,
```

```
     * 0.000, 0.000, 0.000/
      DATA EXMLO3/
C  HDDV
     * 0.145, 0.145, 0.145,
     * 0.145, 0.145, 0.145,
     * 0.118, 0.118, 0.118,
     * 0.100, 0.100, 0.100,
     * 0.000, 0.000, 0.000,
C  MC
     * 0.530, 0.530, 0.530,
     * 0.270, 0.270, 0.270,
     * 0.240, 0.240, 0.240,
     * 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000/
C
C  High altitude region
C        Bag1   Bag2   Bag3
C
      DATA EXMHI1/
C
C  LDGV
     * 0.570, 0.420, 0.310,
     * 0.470, 0.300, 0.230,
     * 0.220, 0.140, 0.110,
     * 0.490, 0.310, 0.240,
     * 0.300, 0.200, 0.170,
C  LDGT1
     * 0.570, 0.420, 0.310,
     * 0.560, 0.370, 0.270,
     * 0.500, 0.310, 0.250,
     * 0.370, 0.240, 0.220,
     * 0.000, 0.000, 0.000,
C  LDGT2
     * 0.570, 0.420, 0.310,
     * 0.570, 0.420, 0.310,
     * 0.500, 0.330, 0.250,
     * 0.370, 0.240, 0.220,
     * 0.000, 0.000, 0.000/
      DATA EXMHI2/
C  HDGV
     * 0.910, 0.910, 0.910,
     * 0.600, 0.600, 0.600,
     * 0.350, 0.350, 0.350,
     * 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000,
C  LDDV
     * 0.099, 0.099, 0.099,
     * 0.025, 0.025, 0.025,
     * 0.025, 0.025, 0.025,
     * 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000,
C  LDDT
     * 0.079, 0.079, 0.079,
     * 0.079, 0.079, 0.079,
     * 0.040, 0.040, 0.040,
     * 0.022, 0.022, 0.022,
     * 0.000, 0.000, 0.000/
      DATA EXMHI3/
```

```
C  HDDV
     * 0.333, 0.333, 0.333,
     * 0.333, 0.333, 0.333,
     * 0.271, 0.271, 0.271,
     * 0.230, 0.230, 0.230,
     * 0.000, 0.000, 0.000,
C  MC
     * 0.068, 0.068, 0.068,
     * 0.034, 0.034, 0.034,
     * 0.037, 0.037, 0.037,
     * 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000/
C
C  Last year of methane offset model year groups for all 8 vehicle types
C
C  Low altitude region
C
      DATA IEXMLO/
     * 1974,1976,1977,1979,2020,
     * 1974,1978,1983,2020,0000,
     * 1973,1978,1983,2020,0000,
     * 1978,1986,2020,0000,0000,
     * 1974,1979,2020,0000,0000,
     * 1977,1980,2020,0000,0000,
     * 1977,1981,1987,2020,0000,
     * 1977,1979,2020,0000,0000/
C
C  High altitude region
C
      DATA IEXMHI/
     * 1974,1976,1977,1979,2020,
     * 1974,1978,1983,2020,0000,
     * 1973,1978,1983,2020,0000,
     * 1978,1986,2020,0000,0000,
     * 1974,1979,2020,0000,0000,
     * 1978,1980,1983,2020,0000,
     * 1977,1981,1987,2020,0000,
     * 1977,1979,2020,0000,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 09
C
C  BLOCK DATA 09 initializes evaporative HC hot soak losses.
C
C  Common block array subscripts:
C
C  HOTVAL(13,8,2)  -  HOTVAL ( IG, IV, IR )
C  MYGHOT(13,8,2)  -  MYGHOT ( IG, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type                Description
C  ------  ----  ---------------------------------------------
C  /HOTCOM/:
C
C  MAXHOT   I    maximum number of hot soak HC model year groups allowed
C  HOTVAL   R    hot soak HC loss
C  MYGHOT   I    last year of hot soak HC model year groups
C
C  Local array subscripts:
C
C  HOTVLO(13,8) - HOTVLO ( IG, IV )
C  HOTVHI(13,8) - HOTVHI ( IG, IV )
C  IHOTLO(13,8) - IHOTLO ( IG, IV )
C  IHOTHI(13,8) - IHOTHI ( IG, IV )
C
C  Local array dictionary:
C
C   Name   Type                  Description
C  ------  ----  ------------------------------------------------
C  HOTVLO   R    hot soak HC loss, low altitude region
C  HOTVHI   R    hot soak HC loss, high altitude region
C  IHOTLO   I    last year of model year groups, low altitude region
C  IHOTHI   I    last year of model year groups, high altitude region
C
C  Notes:
C
C  New commercial fuel hot soak losses  were installed.
C
      COMMON /HOTCOM/ MAXHOT,HOTVAL(13,8,2),MYGHOT(13,8,2)
C
      DIMENSION
     *  HOTVLO(13,8),
     *  HOTVHI(13,8),
     *  IHOTLO(13,8),
     *  IHOTHI(13,8)
C
      EQUIVALENCE
     *  (HOTVAL(1,1,1),HOTVLO(1,1)),
     *  (HOTVAL(1,1,2),HOTVHI(1,1)),
     *  (MYGHOT(1,1,1),IHOTLO(1,1)),
     *  (MYGHOT(1,1,2),IHOTHI(1,1))
C
      DATA MAXHOT/13/
C
C  value of hot soak evaporative HC emissions
```

```
C
C  low altitude region
C
      DATA HOTVLO/
C  LDGV
     *22.45,16.15,12.32, 3.98, 3.75, 3.54, 3.31,
     * 3.01, 2.50, 2.05, 1.82, 2*0.,
C  LDGT1
     *22.45,16.15,12.32, 3.98, 3.59, 3.20, 2.81,
     * 2.47, 2.05, 1.82, 3*0.,
C  LDGT2
     *27.66, 3.98, 3.59, 3.20, 2.81, 2.47, 2.05,
     * 1.82, 5*0.,
C  HDGV
     *27.66, 6.34,11*0.,
C  LDDV
     * 0.00,12*0.,
C  LDDT
     * 0.00,12*0.,
C  HDDV
     * 0.00,12*0.,
C  MC
     * 4.56, 7.00, 7.53, 10*0./
C
C  high altitude region
C
      DATA HOTVHI/
C  LDGV
     *29.18,20.99,20.96,12.32,10.31, 9.71, 4.60,
     * 4.30, 3.01, 2.50, 2.05, 1.82, 1*0.,
C  LDGT1
     *29.18,20.99,20.96,12.32,10.31, 4.67, 4.16,
     * 3.65, 3.21, 2.67, 2.37, 2*0.,
C  LDGT2
     *35.96,10.31, 4.67, 4.16, 3.65, 3.21, 2.67,
     * 2.37, 5*0.,
C  HDGV
     *35.96, 8.24,11*0.,
C  LDDV
     * 0.00,12*0.,
C  LDDT
     * 0.00,12*0.,
C  HDDV
     * 0.00,12*0.,
C  MC
     * 5.93, 9.10, 9.79, 10*0./
C
C  last year of hot soak HC model year groups
C
C  low altitude region
      DATA IHOTLO/
     * 1970,1971,1977,1980,1981,1982,1983,1984,1986,1989,2020, 2*0,
     * 1970,1971,1977,1983,1984,1985,1986,1987,1989,2020, 3*0,
     * 1978,1983,1984,1985,1986,1987,1989,2020, 5*0,
     * 1984,2020,11*0,
     * 2020,12*0,
     * 2020,12*0,
     * 2020,12*0,
```

```
     * 1977,1979,2020,10*0/
C
C  high altitude region
C
      DATA IHOTHI/
     * 1970,1971,1976,1977,1980,1981,1982,1983,1984,1986,1989,2020, 1*0,
     * 1970,1971,1976,1977,1983,1984,1985,1986,1987,1989,2020, 2*0,
     * 1978,1983,1984,1985,1986,1987,1989,2020, 5*0,
     * 1984,2020,11*0,
     * 2020,12*0,
     * 2020,12*0,
     * 2020,12*0,
     * 1977,1979,2020,10*0/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 10
C
C  BLOCK DATA 10 initializes the average trips per day values.
C
C  Common block array subscripts:
C
C  TPDVAL(2,8,2)  -  TPDVAL ( IG, IV, IR )
C  MYGTPD(2,8,2)  -  MYGTPD ( IG, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type                Description
C  ------  ----  ------------------------------------------
C  /TPDCOM/:
C
C  MAXTPD   I    maximum number of model year groups allowed
C  TPDVAL   R    average trips per day (tpd)
C  MYGTPD   I    the last year of the model year group
C
C  Local array subscripts:
C
C  ITPDLO(2,8) - ITPDLO ( IG, IV )
C  ITPDHI(2,8) - ITPDHI ( IG, IV )
C  TPDVLO(2,8) - TPDVLO ( IG, IV )
C  TPDVHI(2,8) - TPDVHI ( IG, IV )
C
C  Local array dictionary:
C
C   Name   Type                 Description
C  ------  ----  ---------------------------------------------
C  ITPDLO   I    last year of low altitude region tpd model year group
C  ITPDHI   I    last year of high altitude region tpd model year group
C  TPDVLO   R    average trips per day in low altitude region
C  TPDVHI   R    average trips per day in high altitude region
C
C
      COMMON /TPDCOM/ MAXTPD,TPDVAL(2,8,2),MYGTPD(2,8,2)
C
      DIMENSION
     *   TPDVLO(2,8),
     *   TPDVHI(2,8),
     *   ITPDLO(2,8),
     *   ITPDHI(2,8)
C
      EQUIVALENCE
     *   (TPDVAL(1,1,1),TPDVLO(1,1)),
     *   (TPDVAL(1,1,2),TPDVHI(1,1)),
     *   (MYGTPD(1,1,1),ITPDLO(1,1)),
     *   (MYGTPD(1,1,2),ITPDHI(1,1))
C
      DATA MAXTPD/2/
C
C  Average number of trips per day
C
C  Low altitude region
C
```

```
      DATA TPDVLO/
     *    3.05,  0.0,
     *    3.05,  0.0,
     *    3.05,  0.0,
     *    6.88,  0.0,
     *    3.05,  0.0,
     *    3.05,  0.0,
     *    6.65,  0.0,
     *    1.35,  0.0/
C
C  High altitude region
C
      DATA TPDVHI/
     *    3.05,  0.0,
     *    3.05,  0.0,
     *    3.05,  0.0,
     *    6.88,  0.0,
     *    3.05,  0.0,
     *    3.05,  0.0,
     *    6.65,  0.0,
     *    1.35,  0.0/
C
C  Last year of model year groups
C  Low altitude region
C
      DATA ITPDLO/
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000/
C
C  High altitude region
C
      DATA ITPDHI/
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 11
C
C  BLOCK DATA 11 initializes the evaporative HC diurnal losses.
C
C  Common block array subscripts:
C
C  DIUVAL(13,8,2)  -  DIUVAL ( IG, IV, IR )
C  MYGDIU(13,8,2)  -  MYGDIU ( IG, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /DIUCOM/:
C
C  MAXDIU   I    maximum number of diurnal HC model year groups allowed
C  DIUVAL   R    diurnal HC loss
C  MYGDIU   I    the last year of the diurnal HC model year groups
C
C  Local array subscripts:
C
C  DIUVLO(13,8) - DIUVLO ( IG, IV )
C  DIUVHI(13,8) - DIUVHI ( IG, IV )
C  IDIULO(13,8) - IDIULO ( IG, IV )
C  IDIUHI(13,8) - IDIUHI ( IG, IV )
C
C  Local array dictionary:
C
C   Name   Type                Description
C  ------  ----  ------------------------------------------------
C  DIUVLO   R    diurnal HC loss in low altitude region
C  DIUVHI   R    diurnal HC loss in low altitude region
C  IDIULO   I    last year of low altitude region diurnal HC model year groups
C  IDIUHI   I    last year of high altitude reg. diurnal HC model year groups
C
C  Notes:
C
C  New commercial fuel diurnal losses were installed.
C
      COMMON /DIUCOM/ MAXDIU,DIUVAL(13,8,2),MYGDIU(13,8,2)
C
      DIMENSION
     *  DIUVLO(13,8),
     *  DIUVHI(13,8),
     *  IDIULO(13,8),
     *  IDIUHI(13,8)
C
      EQUIVALENCE
     *  (DIUVAL(1,1,1),DIUVLO(1,1)),
     *  (DIUVAL(1,1,2),DIUVHI(1,1)),
     *  (MYGDIU(1,1,1),IDIULO(1,1)),
     *  (MYGDIU(1,1,2),IDIUHI(1,1))
C
      DATA MAXDIU/13/
C
C  Value of diurnal evaporative HC emissions
```

```
C
C  Low altitude region
C
      DATA DIUVLO/
C  LDGV
     * 47.99,38.58,23.53, 9.31, 9*0.,
C  LDGT1
     * 47.99,38.58,23.53, 9.31, 9*0.,
C  LDGT2
     * 77.89, 9.31,11*0.,
C  HDGV
     * 77.89,14.83,11*0.,
C  LDDV
     * 0.00,12*0.,
C  LDDT
     * 0.00,12*0.,
C  HDDV
     * 0.00,12*0.,
C  MC
     * 6.71, 8.44, 8.60, 10*0./
C
C  High altitude region
C
      DATA DIUVHI/
C  LDGV
     * 62.38,50.15,44.93,22.53,24.11,12.10, 9.31,
     *  6*0.,
C  LDGT1
     * 62.38,50.15,44.93,23.53,24.11,12.10, 7*0.,
C  LDGT2
     *101.26,24.11,12.10,10*0.,
C  HDGV
     *101.26,19.28,11*0.,
C  LDDV
     * 0.00,12*0.,
C  LDDT
     * 0.00,12*0.,
C  HDDV
     * 0.00,12*0.,
C  MC
     * 8.72,10.97,11.18, 10*0./
C
C  Last year of diurnal HC model year groups
C
C  Low altitude region
C
      DATA IDIULO/
     * 1970,1971,1977,2020, 9*0,
     * 1970,1971,1977,2020, 9*0,
     * 1978,2020,11*0,
     * 1984,2020,11*0,
     * 2020,12*0,
     * 2020,12*0,
     * 2020,12*0,
     * 1977,1979,2020,10*0/
C
C  High altitude region
C
```

```
      DATA IDIUHI/
     * 1970,1971,1976,1977,1981,1983,2020, 6*0,
     * 1970,1971,1976,1977,1981,2020, 7*0,
     * 1978,1981,2020,10*0,
     * 1984,2020,11*0,
     * 2020,12*0,
     * 2020,12*0,
     * 2020,12*0,
     * 1977,1979,2020,10*0/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 12
C
C  BLOCK DATA 12 initializes the average miles per day values.
C
C  Common block array subscripts:
C
C  XMPVAL(2,8,2)  -  XMPVAL ( IG, IV, IR )
C  MYGMPD(2,8,2)  -  MYGMPD ( IG, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /XMPCOM/:
C
C  MAXXMP   I    maximum number of mpd model year groups allowed
C  XMPVAL   R    average miles per day (mpd)
C  MYGMPD   I    last year of mpd model year groups
C
C  Local array subscripts:
C
C  IMPDLO(2,8) - IMPDLO ( IG, IV )
C  IMPDHI(2,8) - IMPDHI ( IG, IV )
C  XMPVLO(2,8) - XMPVLO ( IG, IV )
C  XMPVHI(2,8) - XMPVHI ( IG, IV )
C
C  Local array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------
C  IMPDLO   I    last year of low altitude region mpd model year groups
C  IMPDHI   I    last year of high altitude region mpd model year groups
C  XMPVLO   R    average miles per day in low altitude region
C  XMPVHI   R    average miles per day in high altitude region
C
      COMMON /XMPCOM/ MAXXMP,XMPVAL(2,8,2),MYGMPD(2,8,2)
C
      DIMENSION
     *  XMPVLO(2,8),
     *  XMPVHI(2,8),
     *  IMPDLO(2,8),
     *  IMPDHI(2,8)
C
      EQUIVALENCE
     *  (XMPVAL(1,1,1),XMPVLO(1,1)),
     *  (XMPVAL(1,1,2),XMPVHI(1,1)),
     *  (MYGMPD(1,1,1),IMPDLO(1,1)),
     *  (MYGMPD(1,1,2),IMPDHI(1,1))
C
      DATA MAXXMP/2/
C
C  Average miles per day
C
C  Low altitude region
C
      DATA XMPVLO/
```

```
     *    31.1,  0.0,
     *    26.3,  0.0,
     *    33.7,  0.0,
     *    36.7,  0.0,
     *    31.1,  0.0,
     *    29.8,  0.0,
     *   138.3,  0.0,
     *     8.3,  0.0/
C
C  High altitude region
C
      DATA XMPVHI/
     *    31.1,  0.0,
     *    26.3,  0.0,
     *    33.7,  0.0,
     *    36.7,  0.0,
     *    31.1,  0.0,
     *    29.8,  0.0,
     *   138.3,  0.0,
     *     8.3,  0.0/
C
C  Last year of mpd model year groups
C  Low altitude region
C
      DATA IMPDLO/
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000/
C
C  High altitude region
C
      DATA IMPDHI/
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000,
     *   2020,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 13
C
C  BLOCK DATA 13 initializes the evaporative crankcase HC emissions.
C
C  Common block array subscripts:
C
C  CRAVAL(3,8,2)  -  CRAVAL ( IG, IV, IR )
C  MYGCRA(3,8,2)  -  MYGCRA ( IG, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /CRACOM/:
C
C  MAXCRA   I    maximum number of crankcase HC model year groups allowed
C  CRAVAL   R    crankcase HC emissions
C  MYGCRA   I    last year of crankcase HC model year groups
C
C  Local array subscripts:
C
C  CRAVLO(3,8) - CRAVLO ( IG, IV )
C  CRAVHI(3,8) - CRAVHI ( IG, IV )
C  ICRALO(3,8) - ICRALO ( IG, IV )
C  ICRAHI(3,8) - ICRAHI ( IG, IV )
C
C  Local array dictionary:
C
C   Name   Type                Description
C  ------  ----  ----------------------------------------
C  CRAVLO   R    crankcase HC emissions in high altitude region
C  CRAVHI   R    crankcase HC emissions in high altitude region
C  ICRALO   I    last year of crankcase HC model year groups
C  ICRAHI   I    last year of crankcase HC model year groups
C
      COMMON /CRACOM/ MAXCRA,CRAVAL(3,8,2),MYGCRA(3,8,2)
C
      DIMENSION
     *  CRAVLO(3,8),
     *  CRAVHI(3,8),
     *  ICRALO(3,8),
     *  ICRAHI(3,8)
C
      EQUIVALENCE
     *  (CRAVAL(1,1,1),CRAVLO(1,1)),
     *  (CRAVAL(1,1,2),CRAVHI(1,1)),
     *  (MYGCRA(1,1,1),ICRALO(1,1)),
     *  (MYGCRA(1,1,2),ICRAHI(1,1))
C
      DATA MAXCRA/3/
C
C  Value of crankcase HC emissions
C
C  Low altitude region
C
      DATA CRAVLO/
```

```
     *    4.10,  0.80,  0.00,
     *    4.10,  0.80,  0.00,
     *    5.70,  0.00,  0.00,
     *    5.70,  0.00,  0.00,
     *    0.00,  0.00,  0.00,
     *    0.00,  0.00,  0.00,
     *    0.00,  0.00,  0.00,
     *    0.31,  0.00,  0.00/
C
C  High altitude region
C
      DATA CRAVHI/
     *    5.29,  1.03,  0.00,
     *    5.29,  1.03,  0.00,
     *    7.35,  0.00,  0.00,
     *    7.35,  0.00,  0.00,
     *    0.00,  0.00,  0.00,
     *    0.00,  0.00,  0.00,
     *    0.00,  0.00,  0.00,
     *    0.40,  0.00,  0.00/
C
C  Last year of crankcase HC model year groups
C
C  Low altitude region
C
      DATA ICRALO/
     *   1962,1967,2020,
     *   1962,1967,2020,
     *   1967,2020,0000,
     *   1967,2020,0000,
     *   2020,0000,0000,
     *   2020,0000,0000,
     *   2020,0000,0000,
     *   1977,2020,0000/
C
C  High altitude region
C
      DATA ICRAHI/
     *   1962,1967,2020,
     *   1962,1967,2020,
     *   1967,2020,0000,
     *   1967,2020,0000,
     *   2020,0000,0000,
     *   2020,0000,0000,
     *   2020,0000,0000,
     *   1977,2020,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 14
C
C  BLOCK DATA 14 initializes miscellaneous integer-valued parameters.
C
C  Common block array subscripts:
C
C  IVPTRG(8)  -  IVPTRG ( IVG )
C  IVPTRT(8)  -  IVPTRT ( IVT )
C  IVPTRA(8)  -  IVPTRA ( IVA )
C  IVPTRB(8)  -  IVPTRB ( IVB )
C
C  Common block dictionary:
C
C  /IOUCOM/: a special format is utilized for the i/o unit number (#)
C            common block:
C
C  Unit#   Usage                    Description
C  ------  ------  ------------------------------------------------------------
C  IOUAER  input   anti-tampering program effectiveness rates (when ATPFLG=2)
C  IOUIMD  input   user supplied I/M credits (when IMFLAG=2)
C  IOUGEN  input   user supplied general input data
C  IOUREP  output  formatted report file
C  IOUERR  output  error/warning messages file
C  IOUASK  output  prompting messages file
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------
C  /IVPCOM/:
C  IVPTRG   I     IV subgroup pointer into MYGSPD & GPACOF (see IVG subscript
C                 definition)
C  IVPTRT   I     IV subgroup pointer into TTACOF (see IVT subscript
C                 definition)
C  IVPTRA   I     IV subgroup pointer into SCFADJ, ISPGRP & ALHRET (see IVA
C                 subscript definition)
C  IVPTRB   I     IV subgroup pointer into GPBCOF (see IVB subscript
C                 definition)
C
C  /NEWEQU/:
C
C  MAXEQU   I     maximum number of emission rate equations possible for any
C                 given combination of IR, IV and IP.  MAXEQU = dimension of
C                 the first subscript of arrays ZMLBEF, DRBEF, ZMLIDL, DRIDL
C                 and MYGERQ.
C
C  /SYSCOM/:
C
C  MAXVEH   I     maximum number of vehicle types - additional categories
C                 may be created by combining 2 or more of the base 8 types
C                 (LDGT = LDGT1 + LDGT2)
C  MAXLTW   I     maximum number of vehicle types that can be affected by
C                 ALUH's optional correction factors for a/c, extra load
C                 and trailer towing ( = 3 = LDGV, LDGT1 & LDGT2 )
C  MAXPOL   I     maximum number of pollutants covered by MOBILE3
C                 ( = 3 = HC, CO & NOx )
C  MAXREG   I     maximum number of regions allowed in MOBILE3
C                 ( = 3 = low, high & mid )
```

```
C  INITPR   I    switch: 1 = initial print pass => call OUTHDR; 0 = skip call
C
C  /YEARS4/:
C
C  IY1941   I    4-digit representation of year 1941
C  IY1960   I    4-digit representation of year 1960
C  IY2020   I    4-digit representation of year 2020
C
C  Notes:
C
C  The value of MAXEQU was increased from 15 to 20 as a result of the
C  new model year groups and ZML and DR rates for HDGV and HDDV.
C
C  IOUUNF I/O unit parameter was removed.  IOUAER was added & set equal to 3.
C
C
      COMMON /IOUCOM/ IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK
      COMMON /IVPCOM/ IVPTRG(8),IVPTRT(8),IVPTRA(8),IVPTRB(8)
      COMMON /NEWEQU/ MAXEQU
      COMMON /SYSCOM/ MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR
      COMMON /YEARS4/ IY1941,IY1960,IY2020
C
      DATA IOUAER,IOUIMD,IOUGEN,IOUREP,IOUERR,IOUASK/3,4,5,3*6/
C
      DATA IVPTRG/1,2,3,0,4,5,0,6/
C
      DATA IVPTRT/1,2,3,0,4,5,0,6/
C
      DATA IVPTRA/1,2,3,0,0,0,0,4/
C
      DATA IVPTRB/0,0,0,1,2,3,4,0/
C
      DATA MAXEQU/20/
C
      DATA MAXVEH,MAXLTW,MAXPOL,MAXREG,INITPR/8,3,3,2,1/
C
      DATA IY1941,IY1960,IY2020/1941,1960,2020/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 15
C
C  BLOCK DATA 15 initializes the temperature correction factor coefficients.
C
C  Common block array subscripts:
C
C  TTACOF(2,3,9,3,6)  -  TTACOF ( MDLOHI, IB, IT, IP, IVT )
C  TT4COF(2,9,3)      -  TT4COF ( MDLOHI, IT, IP )
C  TT7COF(2,3)        -  TT7COF ( MDLOHI, IP )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------
C  /TCCOM1/:
C
C  TTACOF   R    low/high temperature correction factor (cf) coefficients for
C                all light duty vehicles/trucks and MC
C  TT4COF   R    low/high temperature cf coefficients for HDGV
C  TT7COF   R    low/high temperature cf coefficients for HDDV
C
C  Local array subscripts:
C
C  TC1HC(2,3,9)    -  TC1HC ( MDLOHI, IB, IT )
C  TC1CO(2,3,9)    -  TC1CO ( MDLOHI, IB, IT )
C  TC1NOX(2,3,9)   -  TC1NOX ( MDLOHI, IB, IT )
C  TC2HC(2,3,9)    -  TC2HC ( MDLOHI, IB, IT )
C  TC2CO(2,3,9)    -  TC2CO ( MDLOHI, IB, IT )
C  TC2NOX(2,3,9)   -  TC2NOX ( MDLOHI, IB, IT )
C  TC3HC(2,3,9)    -  TC3HC ( MDLOHI, IB, IT )
C  TC3CO(2,3,9)    -  TC3CO ( MDLOHI, IB, IT )
C  TC3NOX(2,3,9)   -  TC3NOX ( MDLOHI, IB, IT )
C  TC4HC(2,9)      -  TC4HC ( MDLOHI, IT )
C  TC4CO(2,9)      -  TC4CO ( MDLOHI, IT )
C  TC4NOX(2,9)     -  TC4NOX ( MDLOHI, IT )
C  TC5HC(2,3,9)    -  TC5HC ( MDLOHI, IB, IT )
C  TC5CO(2,3,9)    -  TC5CO ( MDLOHI, IB, IT )
C  TC5NOX(2,3,9)   -  TC5NOX ( MDLOHI, IB, IT )
C  TC6HC(2,3,9)    -  TC6HC ( MDLOHI, IB, IT )
C  TC6CO(2,3,9)    -  TC6CO ( MDLOHI, IB, IT )
C  TC6NOX(2,3,9)   -  TC6NOX ( MDLOHI, IB, IT )
C  TC8HC(2,3,9)    -  TC8HC ( MDLOHI, IB, IT )
C  TC8CO(2,3,9)    -  TC8CO ( MDLOHI, IB, IT )
C  TC8NOX(2,3,9)   -  TC8NOX ( MDLOHI, IB, IT )
C
C  Local array dictionary:
C
C   Name   Type                Description
C  ------  ----  ------------------------------------------------
C  For the local arrays equivalenced to TTACOF:
C
C  TC<IVT><IP> R low/high temperature cf coefficients by bag and model year
C                group for vehicle type IVT (1,2,3,5,6,8) and pollutant IP
C                (HC, CO, NOX)
C
C  For the local arrays equivalenced to TT4COF:
```

```
C
C  TC4<IP>  R     low/high temperature cf coefficients by model year group
C                 for pollutant IP (HC, CO, NOX)
C
C  Notes:
C
C  Temperature correction factor coefficents were updated for 1980+ years.
C
      COMMON /TCCOM1/ TTACOF(2,3,9,3,6),TT4COF(2,9,3),TT7COF(2,3)
C
      DIMENSION
     *   TC1HC(2,3,9),TC1CO(2,3,9),TC1NOX(2,3,9),
     *   TC2HC(2,3,9),TC2CO(2,3,9),TC2NOX(2,3,9),
     *   TC3HC(2,3,9),TC3CO(2,3,9),TC3NOX(2,3,9),
     *   TC4HC(2,9),  TC4CO(2,9),  TC4NOX(2,9),
     *   TC5HC(2,3,9),TC5CO(2,3,9),TC5NOX(2,3,9),
     *   TC6HC(2,3,9),TC6CO(2,3,9),TC6NOX(2,3,9),
     *   TC8HC(2,3,9),TC8CO(2,3,9),TC8NOX(2,3,9)
C
      EQUIVALENCE
     *   (TTACOF(1,1,1,1,1),TC1HC(1,1,1)),
     *   (TTACOF(1,1,1,1,2),TC2HC(1,1,1)),
     *   (TTACOF(1,1,1,1,3),TC3HC(1,1,1)),
     *   (TTACOF(1,1,1,1,4),TC5HC(1,1,1)),
     *   (TTACOF(1,1,1,1,5),TC6HC(1,1,1)),
     *   (TTACOF(1,1,1,1,6),TC8HC(1,1,1)),
     *   (TTACOF(1,1,1,2,1),TC1CO(1,1,1)),
     *   (TTACOF(1,1,1,2,2),TC2CO(1,1,1)),
     *   (TTACOF(1,1,1,2,3),TC3CO(1,1,1)),
     *   (TTACOF(1,1,1,2,4),TC5CO(1,1,1)),
     *   (TTACOF(1,1,1,2,5),TC6CO(1,1,1)),
     *   (TTACOF(1,1,1,2,6),TC8CO(1,1,1)),
     *   (TTACOF(1,1,1,3,1),TC1NOX(1,1,1)),
     *   (TTACOF(1,1,1,3,2),TC2NOX(1,1,1)),
     *   (TTACOF(1,1,1,3,3),TC3NOX(1,1,1)),
     *   (TTACOF(1,1,1,3,4),TC5NOX(1,1,1)),
     *   (TTACOF(1,1,1,3,5),TC6NOX(1,1,1)),
     *   (TTACOF(1,1,1,3,6),TC8NOX(1,1,1))
C
      EQUIVALENCE
     *   (TT4COF(1,1,1),TC4HC(1,1)),
     *   (TT4COF(1,1,2),TC4CO(1,1)),
     *   (TT4COF(1,1,3),TC4NOX(1,1))
C
C  LDGV
C  HC
C            Bag 1                    Bag 2                    Bag 3
      DATA TC1HC/
     *-.02062300,-.01438100,-.00240320, .00132190,-.00100810, .00347990,
     *-.02446200,-.01255200,-.00320170, .00426670,-.00086884, .00758430,
     *-.02125500,-.01088800,-.00052755,-.00047925, .00093659, .00766660,
     *-.02142700,-.00661070,-.00039442, .00262880, .00497310, .01232000,
     *-.02351700,-.01409500,-.00880570, .02617900,-.00162220, .02429700,
     *-.02779300,-.01409500,-.01017700, .02617900,-.00826800, .02429700,
     *-.03388300, .01195900,-.01011300,-.12627E-4,-.00806500, .00787650,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  CO
```

```
      DATA TC1CO/
     *-.01348700,-.01469100, .00157840, .00374620, .00110970, .01101400,
     *-.02112600,-.03876700,-.00152890, .00846850, .00157490, .02517900,
     *-.02084300,-.02116500,-.00599510, .02360300, .00182530, .02848300,
     *-.01909100,-.01314600,-.00042373, .02471700, .00579820, .02584800,
     *-.02483500,-.01961200,-.00883360, .04853700,-.00115530, .03143900,
     *-.02662800,-.01961200,-.01778300, .04853700,-.01087100, .03143900,
     *-.03599800,-.01259600,-.01881300, .01386100,-.01195100, .00969390,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  NOX
      DATA TC1NOX/
     *-.00016897, .00388410,-.00892450,-.00873250,-.00725800,-.01083900,
     *-.00025074,-.00103890,-.00597910,-.00924660,-.00626900,-.01010800,
     * .00388550,-.01830100,-.00241560,-.01092500,-.00211880,-.01804200,
     *-.45504E-4,-.00714200,-.00125750,-.00879100,-.00053153,-.00754700,
     *-.00760440,-.02615300,-.00680450,-.01860300,-.00541980,-.02087800,
     *-.00301100,-.02615300,-.00671300,-.01860300,-.00453100,-.02087800,
     *-.00537100,-.03441600,-.00650500,-.03587100,-.00856500,-.02883000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C
C  LDGT1
C  HC
      DATA TC2HC/
     *-.02062300,-.01438100,-.00240320, .00132190,-.00100810, .00347990,
     *-.02446200,-.01255200,-.00320170, .00426670,-.00086884, .00758430,
     *-.02125500,-.01088800,-.00052755,-.00047925, .00093659, .00766660,
     *-.02142700,-.00661070,-.00039442, .00262880, .00497310, .01232000,
     *-.02351700,-.01409500,-.00880570, .02617900,-.00162220, .02429700,
     *-.02779300,-.01409500,-.01017700, .02617900,-.00826800, .02429700,
     *-.03388300, .01195900,-.01011300,-.12627E-4,-.00806500, .00787650,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  CO
      DATA TC2CO/
     *-.01348700,-.01469100, .00157840, .00374620, .00110970, .01101400,
     *-.02112600,-.03876700,-.00152890, .00846850, .00157490, .02517900,
     *-.02084300,-.02116500,-.00599510, .02360300, .00182530, .02848300,
     *-.01909100,-.01314600,-.00042373, .02471700, .00579820, .02584800,
     *-.02483500,-.01961200,-.00883360, .04853700,-.00115530, .03143900,
     *-.02662800,-.01961200,-.01778300, .04853700,-.01087100, .03143900,
     *-.03599800,-.01259600,-.01881300, .01386100,-.01195100, .00969390,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  NOX
      DATA TC2NOX/
     *-.00016897, .00388410,-.00892450,-.00873250,-.00725800,-.01083900,
     *-.00025074,-.00103890,-.00597910,-.00924660,-.00626900,-.01010800,
     * .00388550,-.01830100,-.00241560,-.01092500,-.00211880,-.01804200,
     *-.45504E-4,-.00714200,-.00125750,-.00879100,-.00053153,-.00754700,
     *-.00760440,-.02615300,-.00680450,-.01860300,-.00541980,-.02087800,
     *-.00301100,-.02615300,-.00671300,-.01860300,-.00453100,-.02087800,
     *-.00537100,-.03441600,-.00650500,-.03587100,-.00856500,-.02883000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C
C  LDGT2
```

```
C  HC
      DATA TC3HC/
     *-.02062300,-.01438100,-.00240320, .00132190,-.00100810, .00347990,
     *-.02446200,-.01255200,-.00320170, .00426670,-.00086884, .00758430,
     *-.02125500,-.01088800,-.00052755,-.00047925, .00093659, .00766660,
     *-.02142700,-.00661070,-.00039442, .00262880, .00497310, .01232000,
     *-.02351700,-.01409500,-.00880570, .02617900,-.00162220, .02429700,
     *-.02779300,-.01409500,-.01017700, .02617900,-.00826800, .02429700,
     *-.03388300, .01195900,-.01011300,-.12627E-4,-.00806500, .00787650,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  CO
      DATA TC3CO/
     *-.01348700,-.01469100, .00157840, .00374620, .00110970, .01101400,
     *-.02112600,-.03876700,-.00152890, .00846850, .00157490, .02517900,
     *-.02084300,-.02116500,-.00599510, .02360300, .00182530, .02848300,
     *-.01909100,-.01314600,-.00042373, .02471700, .00579820, .02584800,
     *-.02483500,-.01961200,-.00883360, .04853700,-.00115530, .03143900,
     *-.02662800,-.01961200,-.01778300, .04853700,-.01087100, .03143900,
     *-.03599800,-.01259600,-.01881300, .01386100,-.01195100, .00969390,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  NOX
      DATA TC3NOX/
     *-.00016897, .00388410,-.00892450,-.00873250,-.00725800,-.01083900,
     *-.00025074,-.00103890,-.00597910,-.00924660,-.00626900,-.01010800,
     * .00388550,-.01830100,-.00241560,-.01092500,-.00211880,-.01804200,
     *-.45504E-4,-.00714200,-.00125750,-.00879100,-.00053153,-.00754700,
     *-.00760440,-.02615300,-.00680450,-.01860300,-.00541980,-.02087800,
     *-.00301100,-.02615300,-.00671300,-.01860300,-.00453100,-.02087800,
     *-.00537100,-.03441600,-.00650500,-.03587100,-.00856500,-.02883000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C
C  HDGV
C  HC
      DATA TC4HC/
     *-.00589030, .00134580,
     *-.00738700, .00523170,
     *-.00497590, .00546510,
     *-.00285490, .01008200,
     *-.00741070, .02054600,
     *-.00928590, .00848420,
     * .00000000, .00000000,
     * .00000000, .00000000,
     * .00000000, .00000000/
C  CO
      DATA TC4CO/
     *-.00205760, .0081720,
     *-.00455410, .02026800,
     *-.00428990, .02412700,
     *-.00130850, .02206100,
     *-.00771170, .02701900,
     *-.00601950, .00714570,
     * .00000000, .00000000,
     * .00000000, .00000000,
     * .00000000, .00000000/
C  NOX
```

```
      DATA TC4NOX/
     *-.00643150,-.00839860,
     *-.00554560,-.00868800,
     *-.00139690,-.01807900,
     *-.00046352,-.00748890,
     *-.00575240,-.02159300,
     *-.00197330,-.02958400,
     * .00000000, .00000000,
     * .00000000, .00000000,
     * .00000000, .00000000/
C
C  LDDV
C  HC
      DATA TC5HC/
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  CO
      DATA TC5CO/
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  NOX
      DATA TC5NOX/
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C
C  LDDT
C  HC
      DATA TC6HC/
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
```

```
C  CO
      DATA TC6CO/
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  NOX
      DATA TC6NOX/
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C
C  HDDV
      DATA TT7COF/
     * 0.0000,  0.0000,
     * 0.0000,  0.0000,
     * 0.0000,  0.0000/
C
C  MC
C  HC
      DATA TC8HC/
     *-.02062300,-.01438100,-.00240320, .00132190,-.00100810, .00347990,
     *-.02446200,-.01255200,-.00320170, .00426670,-.00086884, .00758430,
     *-.02125500,-.01088800,-.00052755,-.00047925, .00093659, .00766660,
     *-.02142700,-.00661070,-.00039442, .00262880, .00497310, .01232000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  CO
      DATA TC8CO/
     *-.01348700,-.01469100, .00157840, .00374620, .00110970, .01101400,
     *-.02112600,-.03876700,-.00152890, .00846850, .00157490, .02517900,
     *-.02084300,-.02116500,-.00599510, .02360300, .00182530, .02848300,
     *-.01909100,-.01314600,-.00042373, .02471700, .00579820, .02584800,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C  NOX
      DATA TC8NOX/
     *-.00016897, .00388410,-.00892450,-.00873250,-.00725800,-.01083900,
     *-.00025074,-.00103890,-.00597910,-.00924660,-.00626900,-.01010800,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
```

```
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000,
     * .00000000, .00000000, .00000000, .00000000, .00000000, .00000000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 16
C
C  BLOCK DATA 16 initializes the normalized bag fractions used for LDV/T & MC
C  and the speed correction factor coefficients used for HDV & LDDV/T.
C
C  Common block array subscripts:
C
C  GPACOF(8,13,3,6)  -  GPACOF ( IGPA, IGPPTR, IP, IVG )
C     IGPA = bag fraction coefficient index
C          = 1,3,5,7 for ZMLs of bag 1, bag 2, bag 3, & FTP, respectively
C          = 2,4,6,8 for  DRs of bag 1, bag 2, bag 3, & FTP, respectively
C
C  GPBCOF(3,3,3,4)   -  GPBCOF ( IGPB, IP, IGPPTR, IVB )
C     IGPB = second degree polynomial coefficient index
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------
C  /GPCCOM/:
C
C  GPACOF   R    normalized bag fractions for LDV/T & MC
C  GPBCOF   R    speed correction factor coefficients for HDV & LDDV/T
C
C  Local array subscripts:
C  -----------------------
C  GPAC11(8,13)   -  GPAC11 ( IGPA, IGPPTR )
C  GPAC12(8,13)   -  GPAC12 ( IGPA, IGPPTR )
C  GPAC13(8,13)   -  GPAC13 ( IGPA, IGPPTR )
C  GPAC21(8,13)   -  GPAC21 ( IGPA, IGPPTR )
C  GPAC22(8,13)   -  GPAC22 ( IGPA, IGPPTR )
C  GPAC23(8,13)   -  GPAC23 ( IGPA, IGPPTR )
C  GPAC31(8,13)   -  GPAC31 ( IGPA, IGPPTR )
C  GPAC32(8,13)   -  GPAC32 ( IGPA, IGPPTR )
C  GPAC33(8,13)   -  GPAC33 ( IGPA, IGPPTR )
C  GPAC51(8,13)   -  GPAC51 ( IGPA, IGPPTR )
C  GPAC52(8,13)   -  GPAC52 ( IGPA, IGPPTR )
C  GPAC53(8,13)   -  GPAC53 ( IGPA, IGPPTR )
C  GPAC61(8,13)   -  GPAC61 ( IGPA, IGPPTR )
C  GPAC62(8,13)   -  GPAC62 ( IGPA, IGPPTR )
C  GPAC63(8,13)   -  GPAC63 ( IGPA, IGPPTR )
C  GPAC81(8,13)   -  GPAC81 ( IGPA, IGPPTR )
C  GPAC82(8,13)   -  GPAC82 ( IGPA, IGPPTR )
C  GPAC83(8,13)   -  GPAC83 ( IGPA, IGPPTR )
C  GPBC04(3,3,3)  -  GPBC04 ( IGPB, IP, IGPPTR )
C  GPBC05(3,3,3)  -  GPBC05 ( IGPB, IP, IGPPTR )
C  GPBC06(3,3,3)  -  GPBC06 ( IGPB, IP, IGPPTR )
C  GPBC07(3,3,3)  -  GPBC07 ( IGPB, IP, IGPPTR )
C
C  Local array dictionary:
C
C   Name           Type              Description
C  -------------  ----  ------------------------------------
C  GPAC<IVG><IP>   R    normalized bag fractions for vehicle type IVG and
C                       pollutant IP (see subscript definitions for IVG & IP)
C  GPBCO<IVB>      R    speed correction factor coefficients for vehicle type
```

```
C                          IVB (see IVB definition in subscript dictionary)
C
C  Notes:
C
C  Normalized bag fractions were updated for 1975+ years.  The dimensions for
C  bag fractions were increased from 9 (MOBILE2) to 13.
C
C  Speed correction factors were updated.  The HDDV NOx speed coefficients
C  were zeroed out.
C
      COMMON /GPCCOM/ GPACOF(8,13,3,6),GPBCOF(3,3,3,4)
C
      DIMENSION
     *  GPAC11(8,13),GPAC12(8,13),GPAC13(8,13),
     *  GPAC21(8,13),GPAC22(8,13),GPAC23(8,13),
     *  GPAC31(8,13),GPAC32(8,13),GPAC33(8,13),
     *  GPAC51(8,13),GPAC52(8,13),GPAC53(8,13),
     *  GPAC61(8,13),GPAC62(8,13),GPAC63(8,13),
     *  GPAC81(8,13),GPAC82(8,13),GPAC83(8,13)
C
      EQUIVALENCE
     *  (GPACOF(1,1,1,1),GPAC11(1,1)),
     *  (GPACOF(1,1,2,1),GPAC12(1,1)),
     *  (GPACOF(1,1,3,1),GPAC13(1,1)),
     *  (GPACOF(1,1,1,2),GPAC21(1,1)),
     *  (GPACOF(1,1,2,2),GPAC22(1,1)),
     *  (GPACOF(1,1,3,2),GPAC23(1,1)),
     *  (GPACOF(1,1,1,3),GPAC31(1,1)),
     *  (GPACOF(1,1,2,3),GPAC32(1,1)),
     *  (GPACOF(1,1,3,3),GPAC33(1,1)),
     *  (GPACOF(1,1,1,4),GPAC51(1,1)),
     *  (GPACOF(1,1,2,4),GPAC52(1,1)),
     *  (GPACOF(1,1,3,4),GPAC53(1,1)),
     *  (GPACOF(1,1,1,5),GPAC61(1,1)),
     *  (GPACOF(1,1,2,5),GPAC62(1,1)),
     *  (GPACOF(1,1,3,5),GPAC63(1,1)),
     *  (GPACOF(1,1,1,6),GPAC81(1,1)),
     *  (GPACOF(1,1,2,6),GPAC82(1,1)),
     *  (GPACOF(1,1,3,6),GPAC83(1,1))
C
      DIMENSION
     *  GPBC04(3,3,3),
     *  GPBC05(3,3,3),
     *  GPBC06(3,3,3),
     *  GPBC07(3,3,3)
C
      EQUIVALENCE
     *  (GPBCOF(1,1,1,1),GPBC04(1,1,1)),
     *  (GPBCOF(1,1,1,2),GPBC05(1,1,1)),
     *  (GPBCOF(1,1,1,3),GPBC06(1,1,1)),
     *  (GPBCOF(1,1,1,4),GPBC07(1,1,1))
C
C  bag & FTP emissions normalized by zero mile FTP rate
C
C  LDGV
C  HC
C        Bag 1          Bag 2          Bag 3          FTP
      DATA GPAC11/
```

```
     * 1.282, 0.025, 0.973, 0.028, 0.839, 0.019, 1.000, 0.025,
     * 1.345, 0.074, 0.946, 0.054, 0.842, 0.048, 1.000, 0.056,
     * 1.345, 0.178, 0.919, 0.118, 0.894, 0.093, 1.000, 0.124,
     * 1.398, 0.060, 0.885, 0.055, 0.919, 0.036, 1.000, 0.051,
     * 1.856, 0.345, 0.765, 0.233, 0.802, 0.196, 1.000, 0.246,
     * 2.200, 0.714, 0.571, 0.171, 0.914, 0.143, 1.000, 0.274,
     * 2.654, 0.960, 0.383, 0.375, 0.929, 0.310, 1.000, 0.478,
     * 2.609, 1.101, 0.387, 0.435, 0.957, 0.365, 1.000, 0.553,
     * 2.613, 1.097, 0.384, 0.443, 0.958, 0.367, 1.000, 0.557,
     * 2.603, 1.285, 0.372, 0.529, 0.989, 0.417, 1.000, 0.654,
     * 2.617, 1.173, 0.371, 0.510, 0.981, 0.404, 1.000, 0.618,
     * 2.634, 1.104, 0.368, 0.499, 0.973, 0.391, 1.000, 0.594,
     * 2.639, 1.051, 0.368, 0.489, 0.969, 0.385, 1.000, 0.577/
C  CO
      DATA GPAC12/
     * 1.277, 0.033, 1.017, 0.029, 0.758, 0.025, 1.000, 0.029,
     * 1.442, 0.071, 0.996, 0.042, 0.674, 0.033, 1.000, 0.046,
     * 1.553, 0.109, 0.933, 0.079, 0.711, 0.038, 1.000, 0.074,
     * 1.573, 0.054, 0.902, 0.079, 0.755, 0.029, 1.000, 0.060,
     * 1.792, 0.177, 0.882, 0.157, 0.628, 0.109, 1.000, 0.148,
     * 2.403, 0.278, 0.649, 0.061, 0.621, 0.076, 1.000, 0.110,
     * 3.724, 1.325, 0.000, 0.792, 0.853, 0.659, 1.000, 0.865,
     * 3.854, 2.041, 0.000, 1.152, 0.755, 1.010, 1.000, 1.296,
     * 3.865, 2.030, 0.000, 1.153, 0.746, 1.007, 1.000, 1.294,
     * 3.959, 2.285, 0.000, 1.351, 0.675, 1.163, 1.000, 1.492,
     * 3.946, 2.124, 0.000, 1.254, 0.686, 1.081, 1.000, 1.386,
     * 3.941, 2.009, 0.000, 1.186, 0.689, 1.014, 1.000, 1.308,
     * 3.935, 1.940, 0.000, 1.144, 0.694, 0.979, 1.000, 1.263/
C  NOX
      DATA GPAC13/
     * 1.121, 0.009, 0.785, 0.001, 1.319,-0.009, 1.000, 0.000,
     * 1.199,-0.004, 0.793,-0.002, 1.245, 0.006, 1.000, 0.000,
     * 1.262, 0.022, 0.770, 0.004, 1.242, 0.027, 1.000, 0.014,
     * 1.297, 0.012, 0.781, 0.004, 1.194, 0.016, 1.000, 0.009,
     * 1.371, 0.040, 0.766, 0.046, 1.166, 0.063, 1.000, 0.049,
     * 1.313, 0.047, 0.810, 0.034, 1.125, 0.054, 1.000, 0.042,
     * 1.752, 0.129, 0.737, 0.123, 0.935, 0.173, 1.000, 0.138,
     * 1.652, 0.121, 0.768, 0.115, 0.951, 0.162, 1.000, 0.129,
     * 1.725, 0.137, 0.728, 0.129, 0.973, 0.183, 1.000, 0.145,
     * 1.817, 0.167, 0.707, 0.148, 0.942, 0.219, 1.000, 0.172,
     * 1.818, 0.167, 0.707, 0.148, 0.942, 0.219, 1.000, 0.172,
     * 1.830, 0.169, 0.703, 0.149, 0.939, 0.222, 1.000, 0.173,
     * 1.830, 0.169, 0.704, 0.149, 0.939, 0.222, 1.000, 0.173/
C
C  LDGT1
C  HC
      DATA GPAC21/
     * 1.282, 0.025, 0.973, 0.028, 0.839, 0.019, 1.000, 0.025,
     * 1.345, 0.074, 0.946, 0.054, 0.842, 0.048, 1.000, 0.056,
     * 1.345, 0.178, 0.919, 0.118, 0.894, 0.093, 1.000, 0.124,
     * 1.398, 0.060, 0.885, 0.055, 0.919, 0.036, 1.000, 0.051,
     * 1.860, 0.345, 0.766, 0.234, 0.804, 0.196, 1.000, 0.243,
     * 2.200, 0.714, 0.571, 0.171, 0.914, 0.143, 1.000, 0.286,
     * 2.634, 1.104, 0.368, 0.499, 0.973, 0.391, 1.000, 0.594,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
```

```
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  CO
      DATA GPAC22/
     * 1.277, 0.033, 1.017, 0.029, 0.758, 0.025, 1.000, 0.029,
     * 1.442, 0.071, 0.996, 0.042, 0.674, 0.033, 1.000, 0.046,
     * 1.553, 0.109, 0.933, 0.079, 0.711, 0.038, 1.000, 0.074,
     * 1.573, 0.054, 0.902, 0.079, 0.755, 0.029, 1.000, 0.060,
     * 1.972, 0.176, 0.881, 0.157, 0.628, 0.109, 1.000, 0.139,
     * 2.438, 0.282, 0.658, 0.062, 0.621, 0.077, 1.000, 0.111,
     * 3.941, 2.009, 0.000, 1.186, 0.689, 1.014, 1.000, 1.308,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  NOX
      DATA GPAC23/
     * 1.121, 0.009, 0.785, 0.001, 1.319,-0.009, 1.000, 0.000,
     * 1.199,-0.004, 0.793,-0.002, 1.245, 0.006, 1.000, 0.000,
     * 1.262, 0.022, 0.770, 0.004, 1.242, 0.027, 1.000, 0.014,
     * 1.299, 0.012, 0.783, 0.004, 1.197, 0.016, 1.000, 0.012,
     * 1.372, 0.040, 0.766, 0.046, 1.167, 0.063, 1.000, 0.051,
     * 1.830, 0.169, 0.703, 0.149, 0.939, 0.222, 1.000, 0.173,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C
C  LDGT2
C  HC
      DATA GPAC31/
     * 1.282, 0.025, 0.973, 0.028, 0.839, 0.019, 1.000, 0.025,
     * 1.345, 0.074, 0.946, 0.054, 0.842, 0.048, 1.000, 0.056,
     * 1.398, 0.060, 0.885, 0.055, 0.919, 0.036, 1.000, 0.051,
     * 1.860, 0.345, 0.766, 0.234, 0.804, 0.196, 1.000, 0.243,
     * 2.200, 0.714, 0.571, 0.171, 0.914, 0.143, 1.000, 0.286,
     * 2.634, 1.104, 0.368, 0.499, 0.973, 0.391, 1.000, 0.594,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  CO
      DATA GPAC32/
     * 1.277, 0.033, 1.017, 0.029, 0.758, 0.025, 1.000, 0.029,
     * 1.442, 0.071, 0.996, 0.042, 0.674, 0.033, 1.000, 0.046,
     * 1.573, 0.054, 0.902, 0.079, 0.755, 0.029, 1.000, 0.060,
     * 1.972, 0.176, 0.881, 0.157, 0.628, 0.109, 1.000, 0.139,
     * 2.438, 0.282, 0.658, 0.062, 0.621, 0.077, 1.000, 0.111,
     * 3.941, 2.009, 0.000, 1.186, 0.689, 1.014, 1.000, 1.308,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
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     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  NOX
      DATA GPAC33/
     * 1.121, 0.009, 0.785, 0.001, 1.319,-0.009, 1.000, 0.000,
     * 1.199,-0.004, 0.793,-0.002, 1.245, 0.006, 1.000, 0.000,
     * 1.262, 0.022, 0.770, 0.004, 1.242, 0.027, 1.000, 0.014,
     * 1.372, 0.040, 0.766, 0.046, 1.167, 0.063, 1.000, 0.051,
     * 1.830, 0.169, 0.703, 0.149, 0.939, 0.222, 1.000, 0.173,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C
C  LDDV
C  HC
      DATA GPAC51/
     * 1.209, 0.071, 1.073, 0.056, 0.703, 0.064, 1.000, 0.061,
     * 1.209, 0.105, 1.073, 0.084, 0.703, 0.088, 1.000, 0.098,
     * 1.209, 0.105, 1.073, 0.084, 0.703, 0.088, 1.000, 0.098,
     * 1.209, 0.105, 1.073, 0.084, 0.703, 0.088, 1.000, 0.098,
     * 1.209, 0.105, 1.073, 0.084, 0.703, 0.088, 1.000, 0.098,
     * 1.345, 0.103, 0.966, 0.138, 0.793, 0.103, 1.000, 0.138,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  CO
      DATA GPAC52/
     * 1.199, 0.060, 0.935, 0.042, 0.974, 0.051, 1.000, 0.048,
     * 1.199, 0.067, 0.935, 0.048, 0.974, 0.057, 1.000, 0.054,
     * 1.199, 0.067, 0.935, 0.048, 0.974, 0.057, 1.000, 0.054,
     * 1.199, 0.067, 0.935, 0.048, 0.974, 0.057, 1.000, 0.054,
     * 1.199, 0.067, 0.935, 0.048, 0.974, 0.057, 1.000, 0.054,
     * 1.157, 0.061, 1.000, 0.026, 0.904, 0.035, 1.000, 0.035,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  NOX
      DATA GPAC53/
     * 1.068, 0.026, 0.981, 0.029, 0.985, 0.026, 1.000, 0.028,
     * 1.068, 0.031, 0.981, 0.033, 0.985, 0.030, 1.000, 0.032,
     * 1.068, 0.031, 0.981, 0.033, 0.985, 0.030, 1.000, 0.032,
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     * 1.068, 0.031, 0.981, 0.033, 0.985, 0.030, 1.000, 0.032,
     * 1.068, 0.031, 0.981, 0.033, 0.985, 0.030, 1.000, 0.032,
     * 0.969, 0.031, 1.062, 0.047, 0.906, 0.031, 1.000, 0.039,
     * 0.969, 0.031, 1.062, 0.047, 0.906, 0.031, 1.000, 0.039,
     * 0.969, 0.031, 1.062, 0.047, 0.906, 0.031, 1.000, 0.039,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C
C  LDDT
C  HC
      DATA GPAC61/
     * 1.209, 0.112, 1.073, 0.091, 0.703, 0.093, 1.000, 0.096,
     * 1.209, 0.110, 1.073, 0.089, 0.703, 0.092, 1.000, 0.094,
     * 1.209, 0.110, 1.073, 0.089, 0.703, 0.092, 1.000, 0.094,
     * 1.209, 0.115, 1.073, 0.093, 0.703, 0.095, 1.000, 0.098,
     * 1.209, 0.090, 1.073, 0.072, 0.703, 0.077, 1.000, 0.077,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  CO
      DATA GPAC62/
     * 1.199, 0.062, 0.935, 0.044, 0.974, 0.053, 1.000, 0.050,
     * 1.199, 0.060, 0.935, 0.043, 0.974, 0.051, 1.000, 0.049,
     * 1.199, 0.057, 0.935, 0.040, 0.974, 0.048, 1.000, 0.046,
     * 1.199, 0.057, 0.935, 0.040, 0.974, 0.048, 1.000, 0.046,
     * 1.199, 0.049, 0.935, 0.034, 0.974, 0.042, 1.00C  0.039,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  NOX
      DATA GPAC63/
     * 1.068, 0.033, 0.981, 0.036, 0.985, 0.032, 1.000, 0.034,
     * 1.068, 0.033, 0.981, 0.035, 0.985, 0.032, 1.000, 0.034,
     * 1.068, 0.036, 0.981, 0.038, 0.985, 0.035, 1.000, 0.037,
     * 1.068, 0.071, 0.981, 0.072, 0.985, 0.068, 1.000, 0.071,
     * 1.068, 0.040, 0.981, 0.042, 0.985, 0.038, 1.000, 0.040,
     * 1.068, 0.071, 0.981, 0.072, 0.985, 0.068, 1.000, 0.071,
     * 1.068, 0.040, 0.981, 0.042, 0.985, 0.038, 1.000, 0.040,
     * 1.068, 0.054, 0.981, 0.055, 0.985, 0.052, 1.000, 0.054,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C
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C  MC
C  HC
      DATA GPAC81/
     * 1.282, 0.025, 0.973, 0.028, 0.839, 0.019, 1.000, 0.025,
     * 1.345, 0.074, 0.946, 0.054, 0.842, 0.048, 1.000, 0.056,
     * 1.345, 0.178, 0.919, 0.118, 0.894, 0.093, 1.000, 0.124,
     * 1.398, 0.060, 0.885, 0.055, 0.919, 0.036, 1.000, 0.051,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  CO
      DATA GPAC82/
     * 1.277, 0.033, 1.017, 0.029, 0.758, 0.025, 1.000, 0.029,
     * 1.442, 0.071, 0.996, 0.042, 0.674, 0.033, 1.000, 0.046,
     * 1.553, 0.109, 0.933, 0.079, 0.711, 0.038, 1.000, 0.074,
     * 1.573, 0.054, 0.902, 0.079, 0.755, 0.029, 1.000, 0.060,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C  NOX
      DATA GPAC83/
     * 1.121, 0.009, 0.785, 0.001, 1.319,-0.009, 1.000, 0.000,
     * 1.199,-0.004, 0.793,-0.002, 1.245, 0.006, 1.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000,
     * 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000, 0.000/
C
C  Speed correction factor coefficients: heavy duty and diesel
C
C  HDGV
      DATA GPBC04/
     * 1.608, -.097,  .00083,
     * 1.520, -.098,  .00110,
     *  .824,  .0088, .00000,
     * 1.608, -.097,  .00083,
     * 1.520, -.098,  .00110,
     *  .824,  .0088, .00000,
     * 1.608, -.097,  .00083,
```

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     * 1.520, -.098,  .00110,
     *  .824,  .0088,  .0000/
C
C  LDDV
      DATA GPBC05/
     *  .9090, -.055, .00044,
     * 1.3752, -.088, .00091,
     *  .6680, -.048, .00071,
     *  .9090, -.055, .00044,
     * 1.3752, -.088, .00091,
     *  .6680, -.048, .00071,
     *  .9090, -.055, .00044,
     * 1.3752, -.088, .00091,
     *  .6680, -.048, .00071/
C
C  LDDT
      DATA GPBC06/
     *  .9090, -.055, .00044,
     * 1.3752, -.088, .00091,
     *  .6680, -.048, .00071,
     *  .9090, -.055, .00044,
     * 1.3752, -.088, .00091,
     *  .6680, -.048, .00071,
     *  .9090, -.055, .00044,
     * 1.3752, -.088, .00091,
     *  .6680, -.048, .00071/
C
C  HDDV
      DATA GPBC07/
     *  .9240, -.0550, .00044,
     * 1.3960, -.0880, .00091,
     *  .6760, -.0480, .00071,
     *  .9240, -.0550, .00044,
     * 1.3960, -.0880, .00091,
     *  .6760, -.0480, .00071,
     *  .9240, -.0550, .00044,
     * 1.3960, -.0880, .00091,
     *  .6760, -.0480, .00071/
C
      END
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      BLOCK DATA
C
C  BLOCK DATA Subprogram 17
C
C  BLOCK DATA 17 defines the last years of the model year groups used for
C  indexing GPBCOF and GPACOF.
C
C  Common block array subscripts:
C
C  MYGPBA(13,3,2,8)  -  MYGPBA ( IG, IP, IR, IV )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------
C  /PTRCOM/:
C
C  MAXIGP   R    maximum number of model year groups allowed
C  MYGPBA   I    last year of model year groups for GPBCOF and GPACOF
C
C  Local array subscripts:
C
C  IGPYR1(13,3,2) - IGPYR1( IG, IP, IR )
C  IGPYR2(13,3,2) - IGPYR2( IG, IP, IR )
C  IGPYR3(13,3,2) - IGPYR3( IG, IP, IR )
C  IGPYR4(13,3,2) - IGPYR4( IG, IP, IR )
C  IGPYR5(13,3,2) - IGPYR5( IG, IP, IR )
C  IGPYR6(13,3,2) - IGPYR6( IG, IP, IR )
C  IGPYR7(13,3,2) - IGPYR7( IG, IP, IR )
C  IGPYR8(13,3,2) - IGPYR8( IG, IP, IR )
C
C  Local array dictionary:
C
C   Name   Type                Description
C  ------  ----  ------------------------------------------------
C  IGPYR1   I    the last year of the LDGV model year group
C  IGPYR2   I    the last year of the LDGT1 model year group
C  IGPYR3   I    the last year of the LDGT2 model year group
C  IGPYR4   I    the last year of the HDGV model year group
C  IGPYR5   I    the last year of the LDDV model year group
C  IGPYR6   I    the last year of the LDDT model year group
C  IGPYR7   I    the last year of the HDDV model year group
C  IGPYR8   I    the last year of the MC model year group
C
C  Notes:
C
C  New model year groups were installed.
C
C  The dimensions were increased from 9 (in MOBILE2) to 13.
C
      COMMON /PTRCOM/ MAXIGP,MYGPBA(13,3,2,8)
C
      DIMENSION
     *  IGPYR1(13,3,2),
     *  IGPYR2(13,3,2),
     *  IGPYR3(13,3,2),
     *  IGPYR4(13,3,2),
     *  IGPYR5(13,3,2),
```

```
     *   IGPYR6(13,3,2),
     *   IGPYR7(13,3,2),
     *   IGPYR8(13,3,2)
C
      EQUIVALENCE
     *   (MYGPBA(1,1,1,1),IGPYR1(1,1,1)),
     *   (MYGPBA(1,1,1,2),IGPYR2(1,1,1)),
     *   (MYGPBA(1,1,1,3),IGPYR3(1,1,1)),
     *   (MYGPBA(1,1,1,4),IGPYR4(1,1,1)),
     *   (MYGPBA(1,1,1,5),IGPYR5(1,1,1)),
     *   (MYGPBA(1,1,1,6),IGPYR6(1,1,1)),
     *   (MYGPBA(1,1,1,7),IGPYR7(1,1,1)),
     *   (MYGPBA(1,1,1,8),IGPYR8(1,1,1))
C
      DATA MAXIGP/13/
C
C  Last year of model year groups for normalized bag fractions
C
      DATA IGPYR1/
C  Low altitude region
     * 1967,1969,1971,1974,1979,1980,1981,1982,1983,1984,1986,1989,2020,
     * 1967,1969,1971,1974,1979,1980,1981,1982,1983,1984,1986,1989,2020,
     * 1967,1972,1974,1976,1979,1980,1981,1982,1983,1984,1986,1989,2020,
C  High altitude region
     * 1967,1969,1971,1974,1979,1980,1981,1982,1983,1984,1986,1989,2020,
     * 1967,1969,1971,1974,1979,1980,1981,1982,1983,1984,1986,1989,2020,
     * 1967,1972,1974,1976,1979,1980,1981,1982,1983,1984,1986,1989,2020/
C
C
      DATA IGPYR2/
C  Low altitude region
     * 1967,1969,1971,1974,1983,1986,2020,0000,0000,0000,0000,0000,0000,
     * 1967,1969,1971,1974,1983,1986,2020,0000,0000,0000,0000,0000,0000,
     * 1967,1972,1974,1978,1986,2020,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     * 1967,1969,1971,1974,1983,1986,2020,0000,0000,0000,0000,0000,0000,
     * 1967,1969,1971,1974,1983,1986,2020,0000,0000,0000,0000,0000,0000,
     * 1967,1972,1974,1978,1986,2020,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IGPYR3/
C  Low altitude region
     * 1969,1973,1978,1983,1986,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1969,1973,1978,1983,1986,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1969,1973,1978,1986,2020,0000,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     * 1969,1973,1978,1983,1986,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1969,1973,1978,1983,1986,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1969,1973,1978,1986,2020,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IGPYR4/
C  Low altitude region
     * 1969,1973,1978,1983,1984,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1969,1973,1978,1983,1984,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1969,1973,1978,1983,1984,2020,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     * 1969,1973,1978,1983,1984,2020,0000,0000,0000,0000,0000,0000,0000,
```

```
     * 1969,1973,1978,1983,1984,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1969,1973,1978,1983,1984,2020,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IGPYR5/
C  Low altitude region
     * 1974,1976,1977,1978,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1974,1976,1977,1978,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1974,1976,1977,1978,1979,1980,1982,2020,0000,0000,0000,0000,0000,
C  High altitude region
     * 1974,1976,1977,1978,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1974,1976,1977,1978,1979,2020,0000,0000,0000,0000,0000,0000,0000,
     * 1974,1976,1977,1978,1979,1980,1982,2020,0000,0000,0000,0000,0000/
C
C
      DATA IGPYR6/
C  Low altitude region
     * 1978,1979,1982,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1978,1979,1982,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1978,1979,1984,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     * 1978,1979,1982,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1978,1979,1982,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1978,1979,1984,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IGPYR7/
C  Low altitude region
     * 2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     * 2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA IGPYR8/
C  Low altitude region
     * 1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1977,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     * 1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1977,1979,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     * 1977,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 18
C
C  BLOCK DATA 18 defines the last years of the model year groups used for
C  speed correction factor (scf) coefficients.
C
C  Common block array subscripts:
C
C  MYGSPD(21,2,3)  -  MYGSPD ( IG, IR, IV )
C  MYGSMC(21,2,3)  -  MYGSMC ( IG, IR, IP )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /ISPCOM/:
C
C  MYGSPD   I    last year of scf model year groups for LDGV, LDGT1 & LDGT2
C  MYGSMC   I    last year of scf model year groups for MC
C
C  Local array subscripts:
C
C  ISPDY1(21,2) - ISPDY1( IG, IR )
C  ISPDY2(21,2) - ISPDY2( IG, IR )
C  ISPDY3(21,2) - ISPDY3( IG, IR )
C
C  Local array dictionary:
C
C   Name   Type               Description
C  ------  ----  ----------------------------------------------
C  ISPDY1   I    the last year of LDGV scf model year group
C  ISPDY2   I    the last year of LDGT1 scf model year group
C  ISPDY3   I    the last year of LDGT2 scf model year group
C
C
      COMMON /ISPCOM/ MYGSPD(21,2,3),MYGSMC(21,2,3)
C
      DIMENSION
     *   ISPDY1(21,2),
     *   ISPDY2(21,2),
     *   ISPDY3(21,2)
C
      EQUIVALENCE
     *(MYGSPD(1,1,1),ISPDY1(1,1)),
     *(MYGSPD(1,1,2),ISPDY2(1,1)),
     *(MYGSPD(1,1,3),ISPDY3(1,1))
C
C  Last year of model year groups for speed correction factor coefficients
C     LDGV
      DATA ISPDY1/
C  Low altitude region
     *   0000,1967,0000,1968,1969,1970,1971,0000,0000,0000,
     *   0000,0000,0000,1972,0000,0000,1974,1977,1979,1980,2020,
C  High altitude region
     *   1967,0000,0000,0000,0000,0000,0000,1968,1969,1970,
     *   1971,1972,0000,0000,1974,0000,0000,2020,0000,0000,0000/
C
```

```
C     LDGT1
      DATA ISPDY2/
C  Low altitude region
     *   0000,1967,0000,1968,1969,1970,1971,0000,0000,0000,
     *   0000,0000,0000,1972,0000,0000,1974,1978,1983,1986,2020,
C  High altitude region
     *   1967,0000,0000,0000,0000,0000,0000,1968,1969,1970,
     *   1971,1972,0000,0000,1974,0000,0000,2020,0000,0000,0000/
C
C     LDGT2
      DATA ISPDY3/
C  Low altitude region
     *   0000,1969,0000,0000,1973,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,1978,0000,1983,1986,2020,
C  High altitude region
     *   1969,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,1973,0000,0000,1978,0000,0000,2020,0000,0000,0000/
C
C     MC
      DATA MYGSMC/
C  HC
C  Low altitude region
     *   0000,1977,0000,0000,1979,0000,2020,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     *   1977,0000,0000,0000,0000,0000,0000,0000,1979,0000,
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  CO
C  Low altitude region
     *   0000,1977,0000,0000,1979,0000,2020,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     *   1977,0000,0000,0000,0000,0000,0000,0000,1979,0000,
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  NOX
C  Low altitude region
     *   0000,1977,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,2020,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     *   1977,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,2020,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 19
C
C  BLOCK DATA initializes the correction factors for air conditioning
C  usage (a/c or AC), extra load (XL), and trailer towing (TW).
C
C  Common block array subscripts:
C
C  ACEQIP(8,3,2)     -  ACEQIP ( IGEPTR, IVP, IR )
C  ACCF(2,3,2,3,2)   -  ACCF ( IAC, IP, IGUPTR, IVP, IR )
C  XLCF(3,6,3,2)     -  XLCF ( IP, IGLPTR, IVP, IR )
C  TWCF(3,6,3,2)     -  TWCF ( IP, IGTPTR, IVP, IR )
C  IAC = AC correction equation coefficient number (2 terms per equation)
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------
C  /ALUHAC/:
C
C  ACEQIP   R    fractions of LDGV & LDGT1/2 vehicles equipped with a/c
C  ACCF     R    a/c correction factors
C
C  /ALUHLT/:
C
C  XLCF     R    extra load correction factors
C  TWCF     R    trailer towing correction factors
C
C  Local array subscripts:
C
C  TWCFLO(3,6,3)  -  TWCFLO ( IP, IGLPTR, IVP )
C  TWCFHI(3,6,3)  -  TWCFHI ( IP, IGLPTR, IVP )
C  XLCFLO(3,6,3)  -  XLCFLO ( IP, IGLPTR, IVP )
C  XLCFHI(3,6,3)  -  XLCFHI ( IP, IGLPTR, IVP )
C
C  Local array dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------------
C  TWCFLO   R    trailer towing correction factors for low altitude region
C  TWCFHI   R    trailer towing corrrection factors for high altitude region
C  XLCFLO   R    extra load correction factors for low altitude region
C  XLCFHI   R    extra load correction factors for high altitude region
C
      COMMON /ALUHAC/ ACEQIP(8,3,2),ACCF(2,3,2,3,2)
      COMMON /ALUHLT/ XLCF(3,6,3,2),TWCF(3,6,3,2)
C
      DIMENSION TWCFLO(3,6,3),TWCFHI(3,6,3)
      DIMENSION XLCFLO(3,6,3),XLCFHI(3,6,3)
C
      EQUIVALENCE
     *   (TWCF(1,1,1,1),TWCFLO(1,1,1)),
     *   (TWCF(1,1,1,2),TWCFHI(1,1,1)),
     *   (XLCF(1,1,1,1),XLCFLO(1,1,1)),
     *   (XLCF(1,1,1,2),XLCFHI(1,1,1))
C
C  Fraction of vehicles equipped with a/c
```

```
      DATA ACEQIP/
C  Low altitude region
     *   .07,  .14,  .24,  .37,  .51,  .61,  .72,  0.0,
     *   .32,  .52,  .39,  0.0,  0.0,  0.0,  0.0,  0.0,
     *   .32,  .52,  .39,  0.0,  0.0,  0.0,  0.0,  0.0,
C  High altitude region
     *   .07,  .14,  .24,  .37,  .51,  .61,  .72,  0.0,
     *   .32,  .52,  .39,  0.0,  0.0,  0.0,  0.0,  0.0,
     *   .32,  .52,  .39,  0.0,  0.0,  0.0,  0.0,  0.0/
C
C  A/c correction factors
      DATA ACCF/
C  Low altitude region
     * 1.0230E+0, 0.3344E-2, 1.2020E+0, 0.1808E-2, 1.2990E+0, 0.5643E-4,
     * 1.0000E+0, 0.3512E-2, 1.1300E+0, 0.1528E-2, 1.2210E+0, 0.4262E-3,
     * 1.0230E+0, 0.3344E-2, 1.2020E+0, 0.1808E-2, 1.2990E+0, 0.5643E-4,
     * 1.0000E+0, 0.3512E-2, 1.1300E+0, 0.1528E-2, 1.2210E+0, 0.4262E-3,
     * 1.0230E+0, 0.3344E-2, 1.2020E+0, 0.1808E-2, 1.2990E+0, 0.5643E-4,
     * 1.0000E+0, 0.3512E-2, 1.1300E+0, 0.1528E-2, 1.2210E+0, 0.4262E-3,
C  High altitude region
     * 1.0230E+0, 0.3344E-2, 1.2020E+0, 0.1808E-2, 1.2990E+0, 0.5643E-4,
     * 1.0000E+0, 0.3512E-2, 1.1300E+0, 0.1528E-2, 1.2210E+0, 0.4262E-3,
     * 1.0230E+0, 0.3344E-2, 1.2020E+0, 0.1808E-2, 1.2990E+0, 0.5643E-4,
     * 1.0000E+0, 0.3512E-2, 1.1300E+0, 0.1528E-2, 1.2210E+0, 0.4262E-3,
     * 1.0230E+0, 0.3344E-2, 1.2020E+0, 0.1808E-2, 1.2990E+0, 0.5643E-4,
     * 1.0000E+0, 0.3512E-2, 1.1300E+0, 0.1528E-2, 1.2210E+0, 0.4262E-3/
C
C  Extra load correction factors
C        HC      CO      NOX
C  Low altitude region
      DATA XLCFLO/
C  LDGV
     *   1.0786, 1.2765, 0.9535,
     *   1.0495, 1.1384, 1.0313,
     *   1.0852, 1.2478, 1.0313,
     *   1.0556, 1.1347, 1.0313,
     *   1.0556, 1.1347, 1.0753,
     *   1.0455, 1.3058, 1.0719,
C  LDGT1
     *   1.0786, 1.2765, 0.9535,
     *   1.0495, 1.1384, 1.0313,
     *   1.0852, 1.2478, 1.0313,
     *   1.0556, 1.1347, 1.0313,
     *   1.0556, 1.1347, 1.0753,
     *   1.0455, 1.3058, 1.0719,
C  LDGT2
     *   1.0786, 1.2765, 0.9535,
     *   1.0495, 1.1384, 1.0313,
     *   1.0556, 1.1347, 1.0753,
     *   1.0455, 1.3058, 1.0719,
     *   0.0000, 0.0000, 0.0000,
     *   0.0000, 0.0000, 0.0000/
C
C  High altitude region
      DATA XLCFHI/
C  LDGV
     *   1.0786, 1.2765, 0.9535,
     *   1.0495, 1.1384, 1.0313,
```

```
     *   1.0852, 1.2478, 1.0313,
     *   1.0556, 1.1347, 1.0313,
     *   1.0556, 1.1347, 1.0753,
     *   1.0455, 1.3058, 1.0719,
C  LDGT1
     *   1.0786, 1.2765, 0.9535,
     *   1.0495, 1.1384, 1.0313,
     *   1.0852, 1.2478, 1.0313,
     *   1.0556, 1.1347, 1.0313,
     *   1.0556, 1.1347, 1.0753,
     *   1.0455, 1.3058, 1.0719,
C  LDGT2
     *   1.0786, 1.2765, 0.9535,
     *   1.0495, 1.1384, 1.0313,
     *   1.0556, 1.1347, 1.0753,
     *   1.0455, 1.3058, 1.0719,
     *   0.0000, 0.0000, 0.0000,
     *   0.0000, 0.0000, 0.0000/
C
C  Trailer towing correction factors
C        HC      CO      NOX
C  Low altitude region
      DATA TWCFLO/
C  LDGV
     *   1.2614, 1.9327, 1.1184,
     *   1.2762, 1.8940, 1.1384,
     *   1.4598, 2.4753, 1.1384,
     *   1.7288, 2.1414, 1.1384,
     *   1.7288, 2.1414, 1.2170,
     *   1.5909, 3.9722, 1.3875,
C  LDGT1
     *   1.2614, 1.9327, 1.1184,
     *   1.2762, 1.8940, 1.1384,
     *   1.4598, 2.4753, 1.1384,
     *   1.7288, 2.1414, 1.1384,
     *   1.7288, 2.1414, 1.2170,
     *   1.5909, 3.9722, 1.3875,
C  LDGT2
     *   1.2614, 1.9327, 1.1184,
     *   1.2762, 1.8940, 1.1384,
     *   1.7288, 2.1414, 1.2170,
     *   1.5909, 3.9722, 1.3875,
     *   0.0000, 0.0000, 0.0000,
     *   0.0000, 0.0000, 0.0000/
C
C  High altitude region
      DATA TWCFHI/
C  LDGV
     *   1.2614, 1.9327, 1.1184,
     *   1.2762, 1.8940, 1.1384,
     *   1.4598, 2.4753, 1.1384,
     *   1.7288, 2.1414, 1.1384,
     *   1.7288, 2.1414, 1.2170,
     *   1.5909, 3.9722, 1.3875,
C  LDGT1
     *   1.2614, 1.9327, 1.1184,
     *   1.2762, 1.8940, 1.1384,
     *   1.4598, 2.4753, 1.1384,
```

```
     *   1.7288, 2.1414, 1.1384,
     *   1.7288, 2.1414, 1.2170,
     *   1.5909, 3.9722, 1.3875,
C  LDGT2
     *   1.2614, 1.9327, 1.1184,
     *   1.2762, 1.8940, 1.1384,
     *   1.7288, 2.1414, 1.2170,
     *   1.5909, 3.9722, 1.3875,
     *   0.0000, 0.0000, 0.0000,
     *   0.0000, 0.0000, 0.0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 20
C
C  BLOCK DATA 20 defines the last years of the model year groups used for
C  the a/c, XL, & TW correction factors.
C
C  Common block array subscripts:
C
C  MYGACE(8,3,2)  -  MYGACE ( IG, IVP, IR )
C  MYGACC(2,3,2)  -  MYGACC ( IG, IVP, IR )
C  MYGXLC(6,3,2)  -  MYGXLC ( IG, IVP, IR )
C  MYGTWC(6,3,2)  -  MYGTWC ( IG, IVP, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ---------------------------------------
C  /ALUPAC/:
C
C  MYGACE   I    the last year of the model year groups for ACEQIP
C                (fraction of vehicles equipped with a/c)
C  MYGACC   I    the last year of the model year groups for ACCF
C                (a/c correction factors)
C
C  /ALUPLT/:
C
C  MYGXLC   I    the last year of the model year groups for XLCF
C                (extra load correction factors)
C  MYGTWC   I    the last year of the model year groups for TWCF
C                (trailer towing correction factors)
C
      COMMON /ALUPAC/ MYGACE(8,3,2),MYGACC(2,3,2)
      COMMON /ALUPLT/ MYGXLC(6,3,2),MYGTWC(6,3,2)
C
      DATA MYGACE/
C  Low altitude region
     *  1961,1964,1966,1968,1971,1976,2020,0000,
     *  1976,1977,2020,0000,0000,0000,0000,0000,
     *  1976,1977,2020,0000,0000,0000,0000,0000,
C  High altitude region
     *  1961,1964,1966,1968,1971,1976,2020,0000,
     *  1976,1977,2020,0000,0000,0000,0000,0000,
     *  1976,1977,2020,0000,0000,0000,0000,0000/
C
      DATA MYGACC/
C  Low altitude region
     *  1974,2020,
     *  1974,2020,
     *  1978,2020,
C  High altitude region
     *  1974,2020,
     *  1974,2020,
     *  1978,2020/
C
      DATA MYGXLC/
C  Low altitude region
     *  1967,1969,1971,1972,1974,2020,
```

```
     *   1967,1969,1971,1972,1974,2020,
     *   1969,1973,1978,2020,0000,0000,
C  High altitude region
     *   1967,1969,1971,1972,1974,2020,
     *   1967,1969,1971,1972,1974,2020,
     *   1969,1973,1978,2020,0000,0000/
C
      DATA MYGTWC/
C  Low altitude region
     *   1967,1969,1971,1972,1974,2020,
     *   1967,1969,1971,1972,1974,2020,
     *   1969,1973,1978,2020,0000,0000,
C  High altitude region
     *   1967,1969,1971,1972,1974,2020,
     *   1967,1969,1971,1972,1974,2020,
     *   1969,1973,1978,2020,0000,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 21
C
C  BLOCK DATA 21 initializes the gasoline vs diesel sales fractions.
C
C  Common block array subscripts:
C
C  GSFRAC(22,8,2)   -  GSFRAC ( IGSFPT, IV, IR )
C  MYGSF(22,8,2)    -  MYGSF ( IG, IV, IR )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------------
C  /GSFCOM/:
C
C  MAXGSF    I    maximum number of sales fractions for any IR & IV case
C  GSFRAC    I    gasoline vs diesel sales fractions
C  MYGSF     I    gasoline vs diesel sales fraction model year groups
C
C  Local array subscripts:
C
C  GSFLO(22,8)   -  GSFLO ( IGSFPT, IV)
C  GSFHI(22,8)   -  GSFHI ( IGSFPT, IV)
C  IGSFLO(22,8)  -  IGSFLO ( IG, IV )
C  IGSFHI(22,8)  -  IGSFHI ( IG, IV )
C
C  Local array dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------------
C  GSFLO     R    low altitude region sales fractions
C  GSFHI     R    high altitude region sales fractions
C  IGSFLO    I    last year of sales fraction model year groups
C                 for low altitude regions
C  IGSFHI    I    last year of sales fraction model year groups
C                 for high altitude regions
C
C  Notes:
C
C  Sales fractions were updated.
C
      COMMON /GSFCOM/ MAXGSF,GSFRAC(22,8,2),MYGSF(22,8,2)
C
      DIMENSION
     *  GSFLO(22,8),
     *  GSFHI(22,8),
     *  IGSFLO(22,8),
     *  IGSFHI(22,8)
C
      EQUIVALENCE
     *  (GSFRAC(1,1,1),GSFLO(1,1)),
     *  (GSFRAC(1,1,2),GSFHI(1,1)),
     *  (MYGSF(1,1,1),IGSFLO(1,1)),
     *  (MYGSF(1,1,2),IGSFHI(1,1))
C
      DATA MAXGSF/22/
```

```
C
C  Gas or diesel fraction of total (g + d) vehicle type sales
C
C  Low altitude region
      DATA GSFLO/
C  LDGV
     *1.000, .997, .996, .991, .972, .966, .939, .954, .947, .940, .934,
     * .923, .920, .910, .900, .887, .886, .885, .000, .000, .000, .000,
C  LDGT1
     *1.000, .998, .997, .995, .991, .972, .966, .940, .920, .900, .870,
     * .840, .820, .790, .760, .730, .706, .697, .688, .679, .670, .661,
C  LDGT2
     *1.000, .998, .997, .995, .991, .972, .966, .940, .920, .900, .870,
     * .840, .820, .790, .760, .730, .706, .697, .688, .679, .670, .661,
C  HDGV
     *1.000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
C  LDDV
     * .000, .003, .004, .009, .028, .034, .061, .046, .053, .060, .066,
     * .073, .080, .090, .100, .113, .114, .115, .000, .000, .000, .000,
C  LDDT
     * .000, .002, .003, .005, .009, .028, .034, .060, .080, .100, .130,
     * .160, .180, .210, .240, .270, .294, .303, .312, .321, .330, .339,
C  HDDV
     *1.000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
C  MC
     *1.000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000/
C
C  High altitude region
      DATA GSFHI/
C  LDGV
     *1.000, .997, .996, .991, .972, .966, .939, .954, .947, .940, .934,
     * .923, .920, .910, .900, .887, .886, .885, .000, .000, .000, .000,
C  LDGT1
     *1.000, .998, .997, .995, .991, .972, .966, .940, .920, .900, .870,
     * .840, .820, .790, .760, .730, .706, .697, .688, .679, .670, .661,
C  LDGT2
     *1.000, .998, .997, .995, .991, .972, .966, .940, .920, .900, .870,
     * .840, .820, .790, .760, .730, .706, .697, .688, .679, .670, .661,
C  HDGV
     *1.000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
C  LDDV
     * .000, .003, .004, .009, .028, .034, .061, .046, .053, .060, .066,
     * .073, .080, .090, .100, .113, .114, .115, .000, .000, .000, .000,
C  LDDT
     * .000, .002, .003, .005, .009, .028, .034, .060, .080, .100, .130,
     * .160, .180, .210, .240, .270, .294, .303, .312, .321, .330, .339,
C  HDDV
     *1.000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
C  MC
     *1.000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000,
     * .000, .000, .000, .000, .000, .000, .000, .000, .000, .000, .000/
C
C
```

```
C  Last year of light duty (or motorcycle) model year groups
C
C  Low altitude region
      DATA IGSFLO/
C  LDGV
     *   1974,1976,1977,1978,1979,1980,1981,1982,1983,1984,1985,
     *   1986,1987,1988,1989,1991,1993,2020,0000,0000,0000,0000,
C  LDGT1
     *   1974,1975,1976,1977,1978,1979,1980,1981,1982,1983,1984,
     *   1985,1986,1987,1988,1989,1990,1991,1992,1993,1994,2020,
C  LDGT2
     *   1974,1975,1976,1977,1978,1979,1980,1981,1982,1983,1984,
     *   1985,1986,1987,1988,1989,1990,1991,1992,1993,1994,2020,
C  HDGV
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0C00,0000,0000,0000,0000,0000,0000,0000,0000,
C  LDDV
     *   1974,1976,1977,1978,1979,1980,1981,1982,1983,1984,1985,
     *   1986,1987,1988,1989,1991,1993,2020,0000,0000,0000,0000,
C  LDDT
     *   1974,1975,1976,1977,1978,1979,1980,1981,1982,1983,1984,
     *   1985,1986,1987,1988,1989,1990,1991,1992,1993,1994,2020,
C  HDDV
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  MC
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C  High altitude region
      DATA IGSFHI/
C  LDGV
     *   1974,1976,1977,1978,1979,1980,1981,1982,1983,1984,1985,
     *   1986,1987,1988,1989,1991,1993,2020,0000,0000,0000,0000,
C  LDGT1
     *   1974,1975,1976,1977,1978,1979,1980,1981,1982,1983,1984,
     *   1985,1986,1987,1988,1989,1990,1991,1992,1993,1994,2020,
C  LDGT2
     *   1974,1975,1976,1977,1978,1979,1980,1981,1982,1983,1984,
     *   1985,1986,1987,1988,1989,1990,1991,1992,1993,1994,2020,
C  HDGV
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  LDDV
     *   1974,1976,1977,1978,1979,1980,1981,1982,1983,1984,1985,
     *   1986,1987,1988,1989,1991,1993,2020,0000,0000,0000,0000,
C  LDDT
     *   1974,1975,1976,1977,1978,1979,1980,1981,1982,1983,1984,
     *   1985,1986,1987,1988,1989,1990,1991,1992,1993,1994,2020,
C  HDDV
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  MC
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     *   0000,0000,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 22
C
C  BLOCK DATA 22 initializes character strings used in output formats and
C  pointers into character string arrays.
C
C  Common block array subscripts:
C
C  NOYES(2)      -  NOYES ( <INO,IMTFLG,IMFLAG,ATPFLG> )
C  USNAME(4,4)   -  USNAME ( ICH, IUSD )
C  IUSD(4)       -  IUSD ( ICT )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ----------------------------------------
C  /STRING/:
C
C  NOYES    R    character string for no/yes
C  COMMA    R    character string for comma
C  PERIOD   R    character string for period
C
C  /USDATA/:
C
C  IUSD     I    pointers to the names of user supplied one-time data for run
C  NUSD     I    number of names of user supplied one-time data for this run
C  USNAME   R    names of one-time data supplied by user
C
      REAL*8 USNAME
C
      COMMON /STRING/ NOYES(2),COMMA,PERIOD
      COMMON /USDATA/ USNAME(4,4),NUSD,IUSD(4)
C
      DATA NOYES/'No  ','Yes '/
      DATA COMMA/',   '/,PERIOD/'.   '/
C
      DATA USNAME/' tamperi','ng and m','isfuelin','g rates ',
     *            '  basic ','exhaust ','emission','s rates ',
     *            '  mileag','e accrua','l distri','butions ',
     *            ' veh reg','istratio','n distri','butions '/
C
      DATA NUSD,IUSD/5*0/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 23
C
C  BLOCK DATA 23 defines and initializes the common blocks created by the
C  tampering code.
C
C  Common block array subscripts:
C
C  AER(11,11,2,2)    -  AER    ( IC11, IC11, IPG, IAY )
C  ATR(7,2)          -  ATR    ( ID , IAY )
C  BTR(7,2)          -  BTR    ( ID, IAY )
C  CSAE(12)          -  CSAE   ( IC )
C  CSIZE(12,2)       -  CSIZE  ( IC , IAY )
C  DRTAM(7,2,4)      -  DRTAM  ( ID, IM, IVTAM )
C  EGS(7,2)          -  EGS    ( IEG, IPG )
C  EMEGR(4,3,3)      -  EMEGR  ( IG2, IB, IP )
C  EMI(7,3,3)        -  EMI    ( IEG, IB, IP )
C  EMOX(3,3,3)       -  EMOX   ( IEK, IB, IP )
C  EM3W(3,3,3)       -  EM3W   ( IEK, IB, IP )
C  EVPAER(2,2)       -  EVPAER ( IHG, IAY )
C  EVPEMI(11,3,4)    -  EVPEMI ( IG4, IH, IVTAM )
C  EVPTGS(3,2,4)     -  EVPTGS ( IG3, IHG, IVTAM )
C  INDXCS(5,4)       -  INDXCS ( NT, IS )
C  LVTFLG(4)         -  LVTFLG ( IVTAM )
C  MYEGR(4,4)        -  MYEGR  ( IG2, IVTAM )
C  MYTGS(10,6,4)     -  MYTGS  ( IG1, IQG, IVTAM )
C  MYVEI(11,2,4)     -  MYVEI  ( IG4, IHG, IVTAM )
C  MYVTS(3,2,4)      -  MYVTS  ( IG3, IHG, IVTAM )
C  NTERMS(4)         -  NTERMS ( IS )
C  OMTCF(20,3,8)     -  OMTCF  ( IDX, IP, IV )
C  OMTTAM(20,3,4)    -  OMTTAM ( IDX, IP, IVTAM )
C  TAMBAG(3,3,20,4)  -  TAMBAG ( IB, IP, IDX, IVTAM )
C  TAMEVP(3,20,4)    -  TAMEVP ( IHC, IDX, IVTAM )
C  TGS(10,6,4)       -  TGS    ( IG1, IQG, IVTAM )
C  ZMLTAM(7,2,4)     -  ZMLTAM ( ID, IM, IVTAM )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------------
C  /ATPPAR/:
C
C  ATPFLG = 2 => user enters EVPAER, AER & all of this block:
C
C  LAPSY    I    ATP start year
C  LAP1ST   I    1st (oldest) model year of the ATP
C  LAPLST   I    last (youngest) model year of the ATP
C  LVTFLG   I    which vehicle types covered by the anti-tampering program.
C                for each of the 4 (LDGV, LDGT1, LDGT2, HDGV) flags:
C                  1 = not covered
C                  2 = covered
C                all "1"s = same result as ATPFLG = 1 = no program - the ATP
C                effectiveness matrices are not applied.
C  NLAT     I    number of lines in the ATP name (line 1 of AER matrices file)
C  ATNAME   R    ATP name (lines 2 to NLAT+1 of AER matrices file)
C                = description of the set of credits supplied by the file
C
```

```
C  /BASETR/:
C
C  BTR      R    base tampering rate for standalone disablement cases
C  ZMLTAM   R    tampering zero mile level (intercept)
C  DRTAM    R    tampering deterioration rate (slope)
C
C  TAMFLG = 2 => user replaces all of ZMLTAM & DRTAM with values read in by
C                ONESEC (1-time Data Section).
C
C  /EGSCAL/:
C
C  AER      R    anti-tampering program effectiveness rates: ATPFLG = 2 =>
C                user supplies 4 11 X 11 matrices using 11F5.2 format:
C                   11 X 11 matrix 1 - previous (up thru LAPSY), HC/CO
C                   11 X 11 matrix 2 - previous, NOX
C                   11 X 11 matrix 3 - subsequent (after LAPSY), HC/CO
C                   11 X 11 matrix 4 - subsequent, NOX
C                row IC of each 11 X 11 is multiplied times vector CSIZE to
C                get CSAE(IC).
C  TGS      R    technology (pollution control equipment) group size
C  EGS      R    tampering effects group size
C
C  /EMECAL/:
C
C  EM3W     R    emission impact rates for 3-way catalysts
C  EMOX     R    emission impact rates for oxidation catalysts
C  EMEGR    R    emission offsets for EGR failure
C  EMI      R    emission impact offset assuming 100% tampering rate
C
C  /EVPDAT/:
C
C  EVPAER   R    evap/PCV ATP effectiveness rates: ATPFLG = 2 => user supplies
C                one 2 X 2 matrix using 4F5.2 format:
C                    (1,1) - previous evap    (1,2) - subsequent evap
C                    (2,1) - previous CC      (2,2) - subsequent CC
C  EVPTGS   R    evap/PCV technology group sizes
C  EVPEMI   R    evap/PCV emission impact rates
C
C  /LOOKUP/:
C
C  IVTAM, IQG, IPG, JPGD & IHG are defined in the subscript dictionary.
C
C  /MYCODE/:
C
C  MY       I    model year being evaluated on current IDX loop pass
C  LDXSY    I    pointer: anti-tampering program start year's location in the
C                calendar year's 20 model year window; JDX ordering
C  LMYRVT   I    flag: 1 = IDX not in ATP my range & vt is covered
C                      2 = IDX & vt ok
C  IMDXSY   I    pointer: inspection / maintenance program start year's
C                location in the calendar year's 20 model year window;
C                JDX ordering
C  KINK     I    flag: 1 = tampering rate curves straight;
C                      2 = tampering rate curves have I/M kink
C  IDX, JDX and IAY are defined in the subscript dictionary.
C
C  /MYUBPT/:
C
```

```
C  MYTGS    I    model year range upper bound years for IGDPTR indexing TGS
C  MYEGR    I    model year range upper bound years for IGDPTR indexing EMEGR
C  MYVTS    I    model year range upper bound years for IGDPTR indexing EVPTGS
C  MYVEI    I    model year range upper bound years for IGDPTR indexing EVPEMI
C
C  /OMTCOM/:
C
C  OMTCF    R    operating mode & temperature correction factor to the
C                composite emission factor.  Calculated in BIGCFX.  Passed to
C                function BEF to be multiplied times the CEF.
C  OMTTAM   R    operating mode and temperature corrected tampering effect on
C                bag emissions.  Calculated in BIGCFX.  Passed to BEF to be
C                added to the (corrected for OMTCF & I/M) CEF.
C
C  /SIZCAL/:
C
C  ATR      R    tampering rate adjusted for equipment type & size
C  TGSUSE   R    technology group size from TGS used on EFFGRP IQG loop pass.
C  CSIZE    R    effects category size
C  CSAE     R    CSIZE modified by AER
C
C  /SIZPAR/:
C
C  NTERMS   I    number of overlap category sizes to be subtracted from
C                ATR(IS,IAY) to obtain CSIZE(IS+7,IAY).
C  INDXCS   I    pointer to the category sizes to be subtracted from
C                ATR(IS,IAY) to obtain CSIZE(IS+7,IAY)
C
C  /TAMOUT/:
C
C  TAMBAG   R    tampering effects on the exhaust bag data.  Calculated in
C                subroutine TAMPER.  Passed to BIGCFX to get OMTTAM.
C  TAMEVP   R    tampering effects on the non-exhaust HC emissions: hot soak &
C                diurnal evap & crankcase.  Calculated in subroutine TAMPER.
C                passed to function CCEVRT & added to CCEVRT's components.
C
C  Local array subscripts:
C
C  MYTGSH(10,6)     -  MYTGSH ( IG1, IQG )
C  MYTGSL(10,6,3)   -  MYTGSL ( IG1, IQG, IVTAM )
C  TGSHDV(10,6)     -  TGSHDV ( IG1, IQG )
C  TGSLDV(10,6,3)   -  TGSLDV ( IG1, IQG, IVTAM )
C
C  Local array dictionary:
C
C   Name   Type          Description
C  ------  ----  ------------------------------------------------------
C  MYTGSH   I    my range ub years for HDGV for IGDPTR indexing TGS
C  MYTGSL   I    my range ub years for LDGV/T1/T2 for IGDPTR indexing TGS
C  TGSHDV   R    technology group sizes for HDGV
C  TGSLDV   R    technology group sizes for LDGV/T1/T2
C
C  Notes:
C
C  The following common blocks defined and used elsewhere in MOBILE3 contain
C  data used by the tampering effects section:
C
C  /CUMCOM/: CUMMIL - cumulative mileage array (JDX,IV)
```

```
C  /FLAGS2/: IMFLAG  - I/M program flag
C  /IMPAR1/: ICYIM  - I/M program start year
C             MODYR1 - first model year covered by I/M program
C             MODYR2 - last model year covered by I/M program
C             ILDT   - vehicle types covered by I/M program
C
C  See the BLOCK DATA sections for these commons for more information on their
C  variables / arrays.
C
C  FORTRAN limits the number of continuation lines to 19.  Use equivalenced
C  local arrays to initialize common block arrays if this limit will be
C  exceeded otherwise.  This is true throughout all the BLOCK DATAs.
C
C
      COMMON /ATPPAR/ LAPSY,LAP1ST,LAPLST,LVTFLG(4),NLAT,ATNAME(20,9)
      COMMON /BASETR/ BTR(7,2),ZMLTAM(7,2,4),DRTAM(7,2,4)
      COMMON /EGSCAL/ AER(11,11,2,2),TGS(10,6,4),EGS(7,2)
      COMMON /EMECAL/ EM3W(3,3,3),EMOX(3,3,3),EMEGR(4,3,3),EMI(7,3,3)
      COMMON /EVPDAT/ EVPAER(2,2),EVPTGS(3,2,4),EVPEMI(11,3,4)
      COMMON /LOOKUP/ IVTAM,IQG,IPG,JPGD,IHG
      COMMON /MYCODE/ MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK
      COMMON /MYUBPT/MYTGS(10,6,4),MYEGR(4,4),MYVTS(3,2,4),MYVEI(11,2,4)
      COMMON /OMTCOM/ OMTCF(20,3,8),OMTTAM(20,3,4)
      COMMON /SIZCAL/ ATR(7,2),TGSUSE,CSIZE(12,2),CSAE(12)
      COMMON /SIZPAR/ NTERMS(4),INDXCS(5,4)
      COMMON /TAMOUT/ TAMBAG(3,3,20,4),TAMEVP(3,20,4)
C
      DIMENSION MYTGSL(10,6,3),MYTGSH(10,6)
      DIMENSION TGSLDV(10,6,3),TGSHDV(10,6)
C
      EQUIVALENCE (MYTGS(1,1,1),MYTGSL(1,1,1))
      EQUIVALENCE (MYTGS(1,1,4),MYTGSH(1,1))
      EQUIVALENCE (TGS(1,1,1),TGSLDV(1,1,1))
      EQUIVALENCE (TGS(1,1,4),TGSHDV(1,1))
C
C  /ATPPAR/: values can be replaced by user entered values.
C
      DATA LAPSY,LAP1ST,LAPLST/3*2020/,LVTFLG/4*1/
      DATA NLAT/0/,ATNAME/180*' '/
C
C  /BASETR/: contains BTR, whose rates are calculated during execution.
C             ZMLTAM and DRTAM have hardcoded values that can be replaced with
C             user supplied values in the One-time Data input section.
C
      DATA BTR/14*0./
C
C  Continuation line codes for ZMLTAM and DRTAM:
C    1 = non-I/M case
C    2 = I/M case
C  Each line contains the 7 disablement intercepts (ZMLTAM) and deterioration
C  rates (DRTAM) for the given vehicle type and IM case.
C
C  warning: the I/M rates for HDGV are LDGT2 rates and will not be accessed
C  by MOBILE3, since I/M for HDGV is not allowed in MOBILE3.
C
      DATA ZMLTAM/
C  LDGV
     1  -.0271,-.0195,-.0143, .0165,-.0006,-.0048,.0002,
```

```
     2  -.0101,-.0011,-.0077, .0382,-.0006,-.0048,.0002,
C  LDGT1
     1   .0489, .1353, .1101, .0696,.0502, .0377, .0308,
     2  -.0100, .0332, .0470, .0699,.0502, .0377, .0308,
C  LDGT2
     1   .0489, .1353, .1101, .0696,.0502, .0377, .0308,
     2  -.0100, .0332, .0470, .0699,.0502, .0377, .0308,
C  HDGV
     1   .0489, .1353, .1101, .0696,.0502, .0377, .0308,
     2  -.0100, .0332, .0470, .0699,.0502, .0377, .0308/
C
      DATA DRTAM/
C  LDGV
     1  .02652,.01611,.02022, .00559,.02199,.00335,.00248,
     2  .01111,.00459,.01000,-.00211,.02199,.00335,.00248,
C  LDGT1
     1  .02652,.01611,.02022, .00559,.02199,.00335,.00248,
     2  .01111,.00459,.01000,-.00211,.02199,.00335,.00248,
C  LDGT2
     1  .02652,.01611,.02022, .00559,.02199,.00335,.00248,
     2  .01111,.00459,.01000,-.00211,.02199,.00335,.00248,
C  HDGV
     1  .02652,.01611,.02022, .00559,.02199,.00335,.00248,
     2  .01111,.00459,.01000,-.00211,.02199,.00335,.00248/
C
C  /EGSCAL/: TGS never changes, but AER can be replaced by user supplied
C            rates in One-time Data.  EGS is always computed during execution.
C
C  AER is initialized to 4 11 X 11 matrices with 1.'s down the major diagonal
C  and 0.'s for all other cells.  The continuation line code is:
C    1 = previous (before ATP start year), HC/CO
C    2 = previous, NOX
C    3 = subsequent (at or after ATP start year), HC/CO
C    4 = subsequent, NOX
C
      DATA AER/
     1  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0.,
     1  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,
     2  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0.,
     2  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,
     3  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0.,
     3  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,
     4  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0.,
     4  1.,11*0., 1.,11*0., 1.,11*0., 1.,11*0., 1./
C
C  TGS has up to 10 percentages for each vehicle type / technology
C  combination.  The remaining cells are dummied out with zeroes.
C  For each IVTAM, the continuation line technology code is:
C    1 = air pump only
C    2 = air pump / catalyst
C    3 = catalyst only
C    4 = EGR only
C    5 = EGR / 3-way catalyst
C    6 = no EGR / 3-way catalyst
C
      DATA TGSLDV/
C  LDGV
     1  .00, .05, .10, .30, .15, .10, .05, .00, .00, .00,
```

```
      2  .00, .30, .20, .25, .65, .85, .70, .60, .40, .30,
      3  .00, .50, .55, .65, .30, .15, .30, .40, .60, .70,
      4  .00, .80, .90, .05, .00, .00, .00, .00, .00, .00,
      5  .00, .07, .85, .93, .90, .00, .00, .00, .00, .00,
      6  .00, .02, .07, .10, .00, .00, .00, .00, .00, .00,
C  LDGT1
      1  .00, .05, .10, .30, .10, .00, .00, .00, .00, .00,
      2  .00, .30, .20, .40, .50, .50, .00, .00, .00, .00,
      3  .00, .40, .50, .55, .40, .50, .00, .00, .00, .00,
      4  .00, .80, .90,1.00, .95, .80, .70, .60, .15, .00,
      5  .00, .05, .20, .30, .40, .85, .00, .00, .00, .00,
      6  .00, .00, .00, .00, .00, .00, .00, .00, .00, .00,
C  LDGT2
      1  .00, .00, .00, .00, .00, .00, .00, .00, .00, .00,
      2  .00, .50, .00, .00, .00, .00, .00, .00, .00, .00,
      3  .00, .50, .00, .00, .00, .00, .00, .00, .00, .00,
      4  .00, .30,1.00, .90, .60, .15, .00, .00, .00, .00,
      5  .00, .10, .40, .85, .00, .00, .00, .00, .00, .00,
      6  .00, .00, .00, .00, .00, .00, .00, .00, .00, .00/
C  HDGV
       DATA TGSHDV/
      1  .00, .00, .00, .00, .00, .00, .00, .00, .00, .00,
      2  .00, .37, .00, .00, .00, .00, .00, .00, .00, .00,
      3  .00, .37, .00, .00, .00, .00, .00, .00, .00, .00,
      4  .00,1.00, .00, .00, .00, .00, .00, .00, .00, .00,
      5  .00, .00, .00, .00, .00, .00, .00, .00, .00, .00,
      6  .00, .00, .00, .00, .00, .00, .00, .00, .00, .00/
C
       DATA EGS/14*0.0/
C
C  /EMECAL/: EM3W, EMOX, EMEGR and EMI(1/6/7,IB,IP) never change.
C            EMI(2-5,IB,IP) values are computed during execution.
C
C  Each of the 4 arrays is ordered 1st by pollutant and then by bag.
C  The continuation line code is thus:
C    1 = HC
C    2 = CO
C    3 = NOX
C
C  Within each line the values are blocked by bag 1,2,3 in that order.
C  Within each block the values are ordered by disablement effects group
C  for EM3W, EMOX AMD EMI or by model year group for EMEGR.
C
       DATA EM3W/
      1   1.52, 1.48, 1.44,   0.11, 1.89, 1.77,   0.50, 1.44, 1.30,
      2  41.20,23.87,14.49,   5.18,18.11,11.32,  18.69,12.64, 8.86,
      3   0.00, 1.66, 0.76,   0.00, 2.27, 0.66,   0.00, 2.34, 0.95/
C
       DATA EMOX/
      1   1.80, 2.31, 2.30,   1.37, 3.40, 2.57,   1.04, 2.95, 2.40,
      2  34.67,41.40,46.50,  33.90,28.97,13.13,  21.28,16.06,16.62,
      3   0.00, 0.00, 0.00,   0.00, 0.00, 0.00,   0.00, 0.00, 0.00/
C
       DATA EMEGR/
      1  4*0.00,  4*0.00,  4*0.00,
      2  4*0.00,  4*0.00,  4*0.00,
      3  1.40,3.82,4.11,1.36, 0.96,2.63,2.68,1.19, 1.54,4.21,4.53,1.21/
C
```

```
      DATA EMI/
     1  1.80,6*0.00,        1.37,6*0.00,        1.04,6*0.00,
     2  34.67,6*0.00,       33.90,6*0.00,       21.28,6*0.00,
     3  5*0.00,3.02,2.12,   5*0.00,3.46,1.85,   5*0.00,3.55,2.16/
C
C  /EVPDAT/: EVPTGS and EVPEMI never change.  The user will be allowed to
C            replace the EVPAER rates with values from the One-time Data
C            section.
C
C  All the evap and PCV effectiveness rates start at the neutral value, 1.
C
      DATA EVPAER/4*1./
C
C  EVPTGS continuation line code is:
C    1 = LDGV
C    2 = LDGT1
C    3 = LDGT2
C    4 = HDGV
C  Each line is divided into evap and PCV blocks.  Each block is filled with
C  model year group values and dummy zeroes.
C
      DATA EVPTGS/
     1  .00,1.00, .00,   .00, .00,1.00,
     2  .00,1.00, .00,   .00, .00,1.00,
     3  .00, .05,1.00,   .00,1.00, .00,
     4  .00,1.00, .00,   .00,1.00, .00/
C
C  The EVPEMI continuation line code is:
C    1 = hot soak evap
C    2 = diurnal evap
C    3 = crankcase (PCV)
C  There are up to 9 model year group values per line, with dummy zeroes
C  filling out the array.
C
      DATA EVPEMI/
C  LDGV
     1  .00, 6.39,18.77,10.85,12.03,10.85, 9.61, 7.97, 5.18, 2.72, 1.49,
     2  .00,16.66,11.92,16.04,10.79,10.79,10.79,10.79,10.79,10.79,10.79,
     3  0.00, 3.80, 3.74, 3.51, 3.44, 3.29, 2.83, 2.68, 2.49, 2*0.,
C  LDGT1
     1  .00, 6.39,18.77,10.85,13.28,11.16, 9.03, 6.91, 5.05, 2.72, 1.49,
     2  .00,16.66,11.92,16.04,10.79,10.79,10.79,10.79,10.79,10.79,10.79,
     3  0.00, 3.80, 3.74, 3.51, 3.44, 3.29, 2.83, 2.68, 2.49, 2*0.,
C  LDGT2
     1  0.00,10.85,13.28,11.16, 9.03, 6.91, 5.05, 2.72, 1.49, 2*0.,
     2  0.00,16.04,10.79,10.79,10.79,10.79,10.79,10.79,10.79, 2*0.,
     3  0.00, 5.20, 4.88, 4.78, 4.57, 3.93, 3.73, 3.46, 3*0.,
C  HDGV
     1  0.00,17.28, 9*0.,
     2  0.00,25.54, 9*0.,
     3  0.00, 5.70, 9*0.00/
C
C  /LOOKUP/ & /MYCODE/ are all indices computed during execution.
C
      DATA IVTAM,IQG,IPG,JPGD,IHG/5*1/
      DATA MY,IDX,JDX,LDXSY,LMYRVT,IAY,IMDXSY,KINK/2020,7*1/
C
C  /MYUBPT/: the model year upper bound pointers never change.
```

```
C
C  MYTGS continuation line code corresponds to the IQG code:
C    1 = air pump only
C    2 = air pump / catalyst
C    3 = catalyst only
C    4 = EGR only
C    5 = EGR / 3-way catalyst
C    6 = no EGR / 3-way catalyst
C
      DATA MYTGSL/
C  LDGV
     1  1967,1971,1972,1974,1975,1977,1979,2020,0000,0000,
     2  1974,1976,1977,1979,1980,1981,1982,1984,1986,2020,
     3  1974,1975,1976,1979,1980,1981,1982,1984,1986,2020,
     4  1972,1973,1980,1983,2020,0000,0000,0000,0000,0000,
     5  1979,1980,1983,1986,2020,0000,0000,0000,0000,0000,
     6  1980,1983,1986,2020,0000,0000,0000,0000,0000,0000,
C  LDGT1
     1  1967,1971,1972,1974,1980,2020,0000,0000,0000,0000,
     2  1974,1976,1978,1980,1983,2020,0000,0000,0000,0000,
     3  1974,1975,1976,1978,1980,2020,0000,0000,0000,0000,
     4  1972,1973,1978,1980,1981,1982,1983,1986,2020,0000,
     5  1980,1981,1982,1983,1986,2020,0000,0000,0000,0000,
     6  2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
C  LDGT2
     1  1978,2020,0000,0000,0000,0000,0000,0000,0000,0000,
     2  1978,2020,0000,0000,0000,0000,0000,0000,0000,0000,
     3  1978,2020,0000,0000,0000,0000,0000,0000,0000,0000,
     4  1972,1978,1982,1983,1986,2020,0000,0000,0000,0000,
     5  1982,1983,1986,2020,0000,0000,0000,0000,0000,0000,
     6  2020,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C  HDGV
      DATA MYTGSH/
     1  2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     2  1986,2020,0000,0000,0000,0000,0000,0000,0000,0000,
     3  1986,2020,0000,0000,0000,0000,0000,0000,0000,0000,
     4  1986,2020,0000,0000,0000,0000,0000,0000,0000,0000,
     5  2020,0000,0000,0000,0000,0000,0000,0000,0000,0000,
     6  2020,0000,0000,0000,0000,0000,0000,0000,0000,0000/
C
C  MYEGR keys only on vehicle type, even though EMEGR varies with pollutant
C  and bag number.  Also, cell 2 for LDGT2 is a dummy, since there is no
C  NOX 3.1 standard my range for LDGT2.  Otherwise, the 4 ranges for each
C  IVTAM correspond to the no standard, 3.1, 2.0 and 1.0 cases.
C  The continuation line code is the IVTAM code:
C    1 = LDGV
C    2 = LDGT1
C    3 = LDGT2
C    4 = HDGV
C
      DATA MYEGR/
     1  1974,1976,1980,2020,
     2  1974,1978,1986,2020,
     3  1978,1978,1986,2020,
     4  1986,2020,0000,0000/
C
C  MYVTS continuation line code is also the IVTAM code.  Each line is
C  divided into the evap and PCV blocks.
```

```
C
      DATA MYVTS/
     1 1970,2020,0000,    1962,1967,2020,
     2 1970,2020,0000,    1962,1967,2020,
     3 1970,1978,2020,    1967,2020,0000,
     4 1984,2020,0000,    1967,2020,0000/
C
C  MYVEI continuation line code is
C    1 = evap (hot soak & diurnal)
C    2 = crankcase
C
      DATA MYVEI/
C  LDGV
     1  1970,1971,1977,1980,1981,1982,1983,1984,1986,1989,2020,
     2  1963,1967,1970,1974,1977,1979,1980,1982,2020, 2*0,
C  LDGT1
     1  1970,1971,1977,1980,1983,1984,1985,1986,1987,1989,2020,
     2  1963,1967,1970,1974,1977,1979,1980,1982,2020, 2*0,
C  LDGT2
     1  1978,1980,1983,1984,1985,1986,1987,1989,2020, 2*0,
     2  1967,1970,1974,1977,1979,1980,1982,2020, 3*0,
C  HDGV
     1  1984,2020, 9*0,
     2  1967,2020, 9*0/
C
C  /OMTCF/: all values are computed during execution by BIGCFX.
C
      DATA OMTCF/480*1.0/,OMTTAM/240*0.0/
C
C  /SIZCAL/: values are all computed during execution.
C
      DATA ATR,TGSUSE,CSIZE,CSAE/51*0.0/
C
C  /SIZPAR/: values never change.
C
      DATA NTERMS/5,5,3,3/
      DATA INDXCS/1,2,3,4,5,1,4,5,6,7,2,4,6,0,0,3,5,7,0,0/
C
C  /TAMOUT/: all values are computed during execution - TAMBAG by BAGEME
C                          and TAMEVP by BAGEVP.
C
      DATA TAMBAG/720*0.0/,TAMEVP/240*0.0/
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 24
C
C  BLOCK DATA 24 defines the model year groups for the temperature
C  correction factors.
C
C  Common block array subscripts:
C
C  MYGTCF(9,3,2,8)  -  MYGTCF ( IG, IP, IR, IV )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------
C  /TCCOM2/:
C
C  MAXTCF   I    maximum number of tcf model year groups allowed
C  MYGTCF   I    the last year of the tcf model year groups
C
C  Local array subscripts:
C
C  MYTCV1(9,3,2)  -  MYTCV1 ( IG, IP, IR )
C  MYTCV2(9,3,2)  -  MYTCV2 ( IG, IP, IR )
C  MYTCV3(9,3,2)  -  MYTCV3 ( IG, IP, IR )
C  MYTCV4(9,3,2)  -  MYTCV4 ( IG, IP, IR )
C  MYTCV5(9,3,2)  -  MYTCV5 ( IG, IP, IR )
C  MYTCV6(9,3,2)  -  MYTCV6 ( IG, IP, IR )
C  MYTCV7(9,3,2)  -  MYTCV7 ( IG, IP, IR )
C  MYTCV8(9,3,2)  -  MYTCV8 ( IG, IP, IR )
C
C  Local array dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------
C  MYTCV1   I    the last year of the LDGV model year groups
C  MYTCV2   I    the last year of the LDGT1 model year groups
C  MYTCV3   I    the last year of the LDGT2 model year groups
C  MYTCV4   I    the last year of the HDGV model year groups
C  MYTCV5   I    the last year of the LDDV model year groups
C  MYTCV6   I    the last year of the LDDT model year groups
C  MYTCV7   I    the last year of the HDDV model year groups
C  MYTCV8   I    the last year of the MC model year groups
C
C  Notes:
C
C  Model year groups were updated for 1980+ years.
C
      COMMON /TCCOM2/ MAXTCF,MYGTCF(9,3,2,8)
C
      DIMENSION
     *  MYTCV1(9,3,2),
     *  MYTCV2(9,3,2),
     *  MYTCV3(9,3,2),
     *  MYTCV4(9,3,2),
     *  MYTCV5(9,3,2),
     *  MYTCV6(9,3,2),
     *  MYTCV7(9,3,2),
```

```
     *   MYTCV8(9,3,2)
C
      EQUIVALENCE
     *   (MYGTCF(1,1,1,1),MYTCV1(1,1,1)),
     *   (MYGTCF(1,1,1,2),MYTCV2(1,1,1)),
     *   (MYGTCF(1,1,1,3),MYTCV3(1,1,1)),
     *   (MYGTCF(1,1,1,4),MYTCV4(1,1,1)),
     *   (MYGTCF(1,1,1,5),MYTCV5(1,1,1)),
     *   (MYGTCF(1,1,1,6),MYTCV6(1,1,1)),
     *   (MYGTCF(1,1,1,7),MYTCV7(1,1,1)),
     *   (MYGTCF(1,1,1,8),MYTCV8(1,1,1))
C
      DATA MAXTCF/9/
C
C  Last year of model year groups for temperature correction factor
C
      DATA MYTCV1/
C  Low altitude region
     *   1967,1969,1971,1974,1979,1980,2020,0000,0000,
     *   1967,1969,1971,1974,1979,1980,2020,0000,0000,
     *   1967,1972,1974,1976,1979,1980,2020,0000,0000,
C  High altitude region
     *   1967,1969,1971,1974,1979,1980,2020,0000,0000,
     *   1967,1969,1971,1974,1979,1980,2020,0000,0000,
     *   1967,1972,1974,1976,1979,1980,2020,0000,0000/
C
C
      DATA MYTCV2/
C  Low altitude region
     *   1967,1969,1971,1974,1983,1986,2020,0000,0000,
     *   1967,1969,1971,1974,1983,1986,2020,0000,0000,
     *   1967,1972,1974,1978,1986,0000,2020,0000,0000,
C  High altitude region
     *   1967,1969,1971,1974,1983,0000,2020,0000,0000,
     *   1967,1969,1971,1974,1983,0000,2020,0000,0000,
     *   1967,1972,1974,1978,1986,0000,2020,0000,0000/
C
C
      DATA MYTCV3/
C  Low altitude region
     *   1969,1973,1986,1978,1983,0000,2020,0000,0000,
     *   1969,1973,1986,1978,1983,0000,2020,0000,0000,
     *   1969,1973,1978,0000,1986,0000,2020,0000,0000,
C  High altitude region
     *   1969,1973,0000,1978,1983,0000,2020,0000,0000,
     *   1969,1973,0000,1978,1983,0000,2020,0000,0000,
     *   1969,1973,1978,0000,1986,0000,2020,0000,0000/
C
C
      DATA MYTCV4/
C  Low altitude region
     *   1969,1973,1978,1983,1984,2020,0000,0000,0000,
     *   1969,1973,1978,1983,1984,2020,0000,0000,0000,
     *   1969,1973,1978,1983,1984,2020,0000,0000,0000,
C  High altitude region
     *   1969,1973,1978,1983,1984,2020,0000,0000,0000,
     *   1969,1973,1978,1983,1984,2020,0000,0000,0000,
     *   1969,1973,1978,1983,1984,2020,0000,0000,0000/
```

```
C
C
      DATA MYTCV5/
C  Low altitude region
     *   1974,1976,1977,1978,1979,2020,0000,0000,0000,
     *   1974,1976,1977,1978,1979,2020,0000,0000,0000,
     *   1974,1976,1977,1978,1979,1980,1982,2020,0000,
C  High altitude region
     *   1974,1976,1977,1978,1979,2020,0000,0000,0000,
     *   1974,1976,1977,1978,1979,2020,0000,0000,0000,
     *   1974,1976,1977,1978,1979,1980,1982,2020,0000/
C
C
      DATA MYTCV6/
C  Low altitude region
     *   1978,1979,1982,2020,0000,0000,0000,0000,0000,
     *   1978,1979,1982,2020,0000,0000,0000,0000,0000,
     *   1978,1979,1984,2020,0000,0000,0000,0000,0000,
C  High altitude region
     *   1978,1979,1982,2020,0000,0000,0000,0000,0000,
     *   1978,1979,1982,2020,0000,0000,0000,0000,0000,
     *   1978,1979,1984,2020,0000,0000,0000,0000,0000/
C
C
      DATA MYTCV7/
C  Low altitude region
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000,
     *   2020,0000,0000,0000,0000,0000,0000,0000,0000/
C
C
      DATA MYTCV8/
C  Low altitude region
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,
     *   1977,2020,0000,0000,0000,0000,0000,0000,0000,
C  High altitude region
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,
     *   1977,1979,2020,0000,0000,0000,0000,0000,0000,
     *   1977,2020,0000,0000,0000,0000,0000,0000,0000/
C
      END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 25
C
C  BLOCK DATA 25 initializes the HDDV characterization data by weight subclass
C  (C2B,L,M,H array name prefixes) and by relative model year (JDX & KDX):
C  (1) annual mileage accumulation rates
C  (2) total new registrations
C
C  Common block array subscripts:
C
C  C2BDVM(20) - C2BDVM ( JDX )
C   LHDVM(20) -  LHDVM ( JDX )
C   MHDVM(20) -  MHDVM ( JDX )
C   HHDVM(20) -  HHDVM ( JDX )
C
C  C2BDRG(21) - C2BDRG(KDX)
C   LHDRG(21) -  LHDRG(KDX)
C   MHDRG(21) -  MHDRG(KDX)
C   HHDRG(21) -  HHDRG(KDX)
C    KDX=1 for pre-1981, 2 for 1981, ... , 21 for 2000+.
C
C  Common block dictionary:
C
C   Name   Type          Description
C  ------  ----  ----------------------------------------
C  /HDDMAR/:
C
C  C2BDVM   R    class 2b HDDV mileage accumulation rates
C  LHDVM    R    light HDDV mileage accumulation rates
C  MHDVM    R    medium HDDV mileage accumulation rates
C  HHDVM    R    heavy HDDV mileage accumulation rates
C
C  /HDDREG/:
C
C  C2BDRG   R    class 2b HDDV new registrations
C  LHDRG    R    light HDDV new registrations
C  MHDRG    R    medium HDDV new registrations
C  HHDRG    R    heavy HDDV new registrations
C
C  Notes:
C
C  This a new BLOCK DATA, added in MOBILE3 to calculate the HDDV mileage
C  accumulation rates weighted by the new registrations of each class.
C
      REAL LHDVM,MHDVM,HHDVM,LHDRG,MHDRG,HHDRG
C
      COMMON /HDDMAR/ C2BDVM(20),LHDVM(20),MHDVM(20),HHDVM(20)
      COMMON /HDDREG/ C2BDRG(21),LHDRG(21),MHDRG(21),HHDRG(21)
C
C Annual average Class 2B truck mileage accumulation (divided by 100000)
C
      DATA C2BDVM/
     * .18352, .16946, .15648, .14449, .13342,
     * .12320, .11376, .10504, .09700, .08956,
     * .08270, .07637, .07052, .06511, .06012,
     * .05552, .05126, .04734, .04371, .04036/
C
```

```
95058     C  Annual average Light HDDV mileage accumulation (divided by 100000)
95059     C
95060           DATA LHDVM/
95061          *.45544, .39671, .34558, .30092, .26213,
95062          *.22834, .19898, .17332, .15098, .13152,
95063          *.11456, .09979, .08693, .07572, .06596,
95064          *.05746, .05005, .04360, .03798, .03308/
95065     C
95066     C  Annual average medium HDDV mileage accumulation (divided by 100000)
95067     C
95068           DATA MHDVM/
95069          *.53370, .46901, .41190, .36206, .31812,
95070          *.27948, .24556, .21575, .18956, .16655,
95071          *.14632, .12856, .11296, .09925, .08719,
95072          *.07661, .06728, .05913, .05196, .04565/
95073     C
95074     C  Annual average heavy HDDV mileage accumulation (divided by 100000)
95075     C
95076           DATA HHDVM/
95077          *.82288, .74984, .68328, .62263, .56737,
95078          *.51700, .47111, .42930, .39119, .35647,
95079          *.32483, .29599, .26972, .24578, .22396,
95080          *.20408, .18597, .16946, .15442, .14071/
95081     C
95082     C Annual Class 2B truck new registrations (1980- through 2000+)
95083     C
95084           DATA C2BDRG/
95085          * .000, .000, .049, .104, .185, .274, .370, .475, .588, .707,
95086          * .831, .960,1.092,1.225,1.354,1.480,1.600,1.712,1.816,1.912,
95087          *1.999/
95088     C
95089     C  Annual light HDDV new registrations (1980- through 2000+)
95090     C
95091           DATA LHDRG/
95092          * .006, .006, .009, .013, .022, .037, .053, .071, .089, .106,
95093          * .122, .137, .151, .165, .178, .190, .202, .212, .222, .230,
95094          * .238/
95095     C
95096     C  Annual medium HDDV new registrations (1980- through 2000+)
95097     C
95098           DATA MHDRG/
95099          * .112, .124, .135, .141, .153, .166, .177, .185, .193, .201,
95100          * .208, .215, .222, .229, .237, .245, .253, .261, .269, .276,
95101          * .283/
95102     C
95103     C  Annual heavy HDDV new registrations (1980- through 2000+)
95104     C
95105           DATA HHDRG/
95106          *1.521,1.581,1.599,1.592,1.641,1.719,1.816,1.927,2.041,2.151,
95107          *2.258,2.362,2.471,2.581,2.693,2.807,2.914,3.015,3.108,3.194,
95108          *3.273/
95109     C
95110           END
```

```
      BLOCK DATA
C
C  BLOCK DATA Subprogram 26
C
C  BLOCK DATA 26 documents those common blocks not initialized by BLOCK DATA
C  subprograms.
C
C  Common block array subscripts:
C
C  ALHRET(20,4,3)  -  ALHRET ( JDX, IG, IP )
C  BERNEW(2,100)   -  BERNEW ( IBER, IFAC )
C  CUMMIL(20,8)    -  CUMMIL ( JDX, IV )
C  EFEVAP(9)       -  EFEVAP ( IV9 )
C  EFFTP(3,9)      -  EFFTP ( IP, IV9 )
C  EFIDLE(3,9)     -  EFIDLE ( IP, IV9 )
C  GSFVCT(8)       -  GSFVCT ( IV )
C  IMNAME(20,9)    -  IMNAME ( JDX, NLIM )
C  JANMYR(20,8)    -  JANMYR ( JDX, IV )
C  NEWFIT(100)     -  NEWFIT ( IFAC )
C  NEWPAR(5,100)   -  NEWPAR ( IPAR, IFAC )
C  OFFCO(20,3)     -  OFFCO ( JDX, IVP )
C  OFFMTH(20,8)    -  OFFMTH ( JDX, IV )
C  PROJID(20)      -  PROJID ( ICH )
C  SPD(8)          -  SPD ( IV )
C  TF(20,8)        -  TF ( JDX, IV )
C  TFMYM(20,8)     -  TFMYM ( JDX, IV )
C  TRAILR(3)       -  TRAILR ( IP )
C  USRMPD(8)       -  USRMPD ( IV )
C  USRTPD(8)       -  USRTPD ( IV )
C  WFTP(3)         -  WFTP ( IP )
C  WIDLE(3)        -  WIDLE ( IP )
C  XLOAD(3)        -  XLOAD ( IP )
C  XMYM(20,8)      -  XMYM ( JDX, IV )
C
C  Common block dictionary:
C
C   Name   Type              Description
C  ------  ----  ------------------------------------------------
C  /CEVCOM/:
C
C  USRTPD   R    user supplied average trips per day
C  USRMPD   R    user supplied average miles per day
C
C  /CUMCOM/:
C
C  CUMMIL   R    cumulative mileage accumulation rates
C
C  /FLAGS1/:
C
C  IPROMT   I    decides Control Section flags read format & prompt status:
C                1 = use vertical flag format; get no prompts
C                2 = use vertical flag format; get prompts for input
C                3 = use horizontal flag format; get no prompts
C                4 = use horizontal flag format; get prompts for input
C                1 = use vertical flag format
C                2 = use horozontal flag format
C  TAMFLG   I    1 = default tampering rates
C                2 = user supplies tampering rates
```

```
C  SPDFLG   I    1 = user supplies one speed for all vehicle types
C                2 = user supplies 8 speeds, 1 for each vehicle type
C  VMFLAG   I    1 = default vmt mix
C                2 = user supplies a new vmt mix for each scenario
C                3 = user supplies 1 vmt mix to apply to all scenarios
C
C  /FLAGS2/:
C
C  MYMRFG   I    1 = default registration distributions/mileage accrual rates
C                2 = user supplies mileage accumulation rates
C                3 = user supplies registration distributions
C                4 = user supplies both
C  NEWFLG   I    1 = use all default exhaust emission rates
C                2 = replace some (not all) of the default rates
C  IMFLAG   I    1 = no I/M program
C                2 = specify and apply I/M program
C  ALHFLG   I    1 = no special correction factors
C                2 = user supplies 6 values: 1 a/c use factor, 3 extra load
C                    usage fractions, 1 trailer towing fraction & 1 humidity
C                    level
C                3 = user supplies 10 values: the 6 above, except 3 instead of
C                    1 towing fractions plus 1 db & 1 wb temperatures
C  ATPFLG   I    1 = no anti-tampering (A-T) program
C                2 = specify A-T program to apply to all scenarios
C
C  /FLAGS3/:
C
C  IFORM    I    various output format selections:
C                1 = MOBILE1-type numerical format
C                2 = MOBILE2-type numerical format
C                3 = 112 column descriptive format
C                4 = 80 column descriptive format
C  PRTFLG   I    1 = HC only, 2 = CO only, 3 = NOx only 4 = HC, CO & NOx
C  ICEVFG   I    1 = default tpd/mpd & no cc/evap HC output line
C                2 = default tpd/mpd, but cc/evap HC output line is printed
C                3 = user supplies tpd/mpd, but no cc/evap HC output line
C                4 = user supplies tpd/mpd & cc/evap HC output line is printed
C  IDLFLG   I    1 = no idle emissions output, 2 = idle emissions output
C  NMHFLG   I    1 = total HC output, 2 = non-methane HC output
C
C  /IMPAR1/:
C
C  ICYIM    I    I/M program start year
C  ISTRIN   I    Technology I/II stringency level of I/M program
C  IMTFLG   I    mechanics training flag: 1 = no & 2 = yes
C  MODYR1   I    first (earliest) year included in the I/M program
C  MODYR2   I    last (latest) year included in the I/M program
C
C  /IMPAR2/:
C
C  ILDT     I    vehicle types included in the I/M program:
C                1 = LDGV only
C                2 = LDGV & LDGT1
C                3 = LDGV & LDGT2
C                4 = LDGV, LDGT1 & LDGT2
C  ITEST    I    technology IV+ test type:
C                1 = idle test
C                2 = 2500 rpm idle test
```

```
C                   3 = loaded idle test
C  ICUTS     I     Technology IV+ cuts:
C                   1 = 0.5 % CO and 100 ppm HC
C                   2 = 1.2 % CO and 220 ppm HC
C                   3 = 3.0 % CO and 300 ppm HC
C  NUDATA    I     new I/M credits data flag:
C                   1 = use all default I/M credits
C                   2 = replace Tech I/II I/M credits
C                   3 = replace Tech IV+ I/M credits
C                   4 = replace all I/M credits
C  NLIM      I     number of lines in the I/M credits file title
C  IMNAME    I     I/M credits file title (usually program type)
C
C  /LNKCOM/:
C
C  SPD       R     user supplied average speeds of 8 vehicle types
C  AMBT      R     user supplied ambient temperature
C  PCCN      R     user supplied % in cold start mode by non-catalyst
C                   equipped vehicle types
C  PCHC      R     user supplied % in hot start mode by catalyst
C                   equipped vehicle types
C  PCCC      R     user supplied % in cold start mode by catalyst
C                   equipped vehicle types
C
C  /MYRCAL/:
C
C  XMYM      R     January 1 model year mileage accumulation rates used to
C                   compute CUMMIL
C  JANMYR    R     January 1 registration distributions
C  TF        R     travel weighting fractions
C  TFMYM     R     January 1 mileage accumulation rates used to compute TF
C
C  /NEWCOM/:
C
C  NEWPAR    R     parameters identifying where (region, vehicle type and
C                   pollutant) and when (first & last model years included)
C                   to use new (user supplied) emission rates
C  BERNEW    R     intercept and slope of user supplied emission rates
C  NEWFIT    I     whether or not (1 or 0) user supplied emission rate
C                   information can be fit into the affected data arrays
C                   (no => the new rate is not stored & not used)
C  NEWCT     I     count of number of sets of new emission rate specifications
C                   entered by user (not necessarily the number actually used -
C                   see NEWFIT)
C
C  /OFFCOM/:
C
C  OFFCO     R     CO offset to basic emission rate
C  OFFMTH    R     methane offset to basic emission rate
C
C  /PROJCM/:
C
C  PROJID    R     user supplied project (i.e., run) title
C
C  /REGCOM/:
C
C  IREJN     I     user supplied region code: 1 = low altitude, 2 = high
C                   1 = low altitude region
```

```
C                 2 = high altitude region
C  ALT      R    altitude in feet
C
C  /REGSUM/:
C
C  GSFVCT   R    fleet gasoline/diesel sales fractions used to split LDV, LDT
C
C  /RESULT/:
C
C  EFFTP    R    composite (3 bag cycle weighted) FTP emission factor for each
C                IV9 class
C  WFTP     R    FTP emission factor for each IV class weighted by
C                corresponding normalized vmt mix fraction and summed together
C  EFEVAP   R    HC evaporative emission factor for each IV9 class
C  EFIDLE   R    hot stabilized idle emission factor for each IV9 class
C  WIDLE    R    idle emission factor for each IV class weighted by
C                corresponding normalized vmt mix fraction and summed together
C
C  /RET1/:
C
C  ALHRET   R    combined correction factor derived from user supplied data
C                on a/c, extra load & trailer towing usage and on ambient
C                humidity & temperature.
C
C  /XCFS1/:
C
C  AC       R    a/c usage factor
C  XLOAD    R    extra load usage fractions
C  TRAILR   R    trailer towing usage fractions
C  ABSHUM   R    absolute humidity level
C  DB       R    dry bulb temperature
C  WB       R    wet bulb temperature
C
      COMMON /CEVCOM/ USRTPD(8),USRMPD(8)
      COMMON /CUMCOM/ CUMMIL(20,8)
      COMMON /FLAGS1/ IPROMT,TAMFLG,SPDFLG,VMFLAG
      COMMON /FLAGS2/ MYMRFG,NEWFLG,IMFLAG,ALHFLG,ATPFLG
      COMMON /FLAGS3/ IFORM, PRTFLG,ICEVFG,IDLFLG,NMHFLG
      COMMON /IMPAR1/ ICYIM,ISTRIN,IMTFLG,MODYR1,MODYR2
      COMMON /IMPAR2/ ILDT,ITEST,ICUTS,NUDATA,NLIM,IMNAME(20,9)
      COMMON /LNKCOM/ SPD(8),AMBT,PCCN,PCHC,PCCC
      COMMON /MYRCAL/ XMYM(20,8),JANMYR(20,8),TF(20,8),TFMYM(20,8)
      COMMON /NEWCOM/ NEWPAR(5,100),BERNEW(2,100),NEWFIT(100),NEWCT
      COMMON /OFFCOM/ OFFCO(20,3),OFFMTH(20,8)
      COMMON /PROJCM/ PROJID(20)
      COMMON /REGCOM/ IREJN,ALT
      COMMON /REGSUM/ GSFVCT(8)
      COMMON /RESULT/ EFFTP(3,9),WFTP(3),EFEVAP(9),EFIDLE(3,9),WIDLE(3)
      COMMON /RET1/   ALHRET(20,4,3)
      COMMON /XCFS1/  AC,XLOAD(3),TRAILR(3),ABSHUM,DB,WB
C
      END
```

Appendix D

ANTI-TAMPERING PROGRAM MATRICES

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Program Type	Description of Inspection	Line Numbers	Page
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Annual	Inspect Air Pump, Catalyst & Canister	551 - 600	D-12
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Annual (Non-I/M)	Inspect Air Pump, Catalyst, Fuel Inlet & Canister	651 - 700	D-14
Annual	Inspect Catalyst, Fuel Inlet (and Plumbtesmo) & Canister	701 - 750	D-15
Annual	Inspect Air Pump, Catalyst, Fuel Inlet (and Plumbtesmo) & Canister	751 - 800	D-16
Annual (I/M)	Inspect Catalyst, Fuel Inlet & Canister	801 - 850	D-17
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Annual (Non-I/M)	Inspect Air Pump, Catalyst, Fuel Inlet & PCV	1101 - 1150	D-23
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Biennial (Non-I/M)	Inspect Air Pump, Catalyst & Fuel Inlet	2001 - 2050	D-41
Biennial	Inspect Catalyst & Fuel Inlet (and Plumbtesmo)	2051 - 2100	D-42
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Random Audit (1%) (Non-I/M)	Inspect Catalyst & Fuel Inlet	4201 - 4250	D-85
Random Audit (1%) (Non-I/M)	Inspect Air Pump, Catalyst & Fuel Inlet	4251 - 4300	D-86
Random Audit (1%)	Inspect Catalyst & Fuel Inlet (and Plumbtesmo)	4301 - 4350	D-87
Random Audit (1%)	Inspect Air Pump, Catalyst & Fuel Inlet (and Plumbtesmo)	4351 - 4400	D-88
Random Audit (1%) (I/M)	Inspect Catalyst & Fuel Inlet	4401 - 4450	D-89
Random Audit (1%) (I/M)	Inspect Air Pump, Catalyst & Fuel Inlet	4451 - 4500	D-90
Random Audit (2%)	Inspect Air Pump Only	4501 - 4550	D-91
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Random Audit (2%) (Non-I/M)	Inspect Catalyst & Fuel Inlet	4651 - 4700	D-94
Random Audit (2%) (Non-I/M)	Inspect Air Pump, Catalyst & Fuel Inlet	4701 - 4750	D-95
Random Audit (2%)	Inspect Catalyst & Fuel Inlet (and Plumbtesmo)	4751 - 4800	D-96
Random Audit (2%)	Inspect Air Pump, Catalyst & Fuel Inlet (and Plumbtesmo)	4801 - 4850	D-97
Random Audit (2%) (I/M)	Inspect Catalyst & Fuel Inlet	4851 - 4900	D-98
Random Audit (2%) (I/M)	Inspect Air Pump, Catalyst & Fuel Inlet	4901 - 4950	D-99
Random Audit (5%)	Inspect Air Pump Only	4951 - 5000	D-100
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Random Audit (5%) (Non-I/M)	Inspect Catalyst & Fuel Inlet	5101 - 5150	D-103
Random Audit (5%) (Non-I/M)	Inspect Air Pump, Catalyst & Fuel Inlet	5151 - 5200	D-104
Random Audit (5%)	Inspect Catalyst & Fuel Inlet (and Plumbtesmo)	5201 - 5250	D-105
Random Audit (5%)	Inspect Air Pump, Catalyst & Fuel Inlet (and Plumbtesmo)	5251 - 5300	D-106
Random Audit (5%) (I/M)	Inspect Catalyst & Fuel Inlet	5301 - 5350	D-107
Random Audit (5%) (I/M)	Inspect Air Pump, Catalyst & Fuel Inlet	5351 - 5400	D-108
No Program	No Reductions	5401 - 5450	D-109

```
 1    4
 2    **
 3    **
 4    ** ANNUAL : INSPECT AIR PUMP ONLY
 5    **
 6     1.00 1.00 1.00 1.00                                          EVAP/PCV
 7     0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
 8      .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
 9      .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
10      .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
11      .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
12      .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
13      .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
14      .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
15     0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
16      .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
17      .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
18     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
19      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
20      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
21      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
22      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
23      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
24      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
25      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
26      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
27      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
28      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
29     0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
30      .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
31      .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
32      .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
33      .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
34      .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
35      .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
36      .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
37     0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
38      .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
39      .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
40     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
41      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
42      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
43      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
44      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
45      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
46      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
47      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
48      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
49      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
50      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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 51     4
 52     **
 53     **
 54     ** ANNUAL : INSPECT CATALYST ONLY
 55     **
 56      1.00 1.00 1.00 1.00                                          EVAP/PCV
 57      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
 58       .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
 59       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
 60       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
 61       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
 62       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
 63       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 64      0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
 65       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
 66       .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
 67       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 68      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
 69       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
 70       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
 71       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
 72       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
 73       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
 74       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
 75       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
 76       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
 77       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
 78       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 79      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
 80       .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
 81       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
 82       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
 83       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
 84       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
 85       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 86      0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
 87       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
 88       .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
 89       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 90      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
 91       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
 92       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
 93       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
 94       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
 95       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
 96       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
 97       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
 98       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
 99       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
100       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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101     4
102     **
103     **
104     ** ANNUAL : INSPECT AIR PUMP & CATALYST ONLY
105     **
106      1.00 1.00 1.00 1.00                                          EVAP/PCV
107      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
108       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
109       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
110       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
111       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
112       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
113       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
114      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
115       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
116       .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
117       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
118      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
119       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
120       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
121       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
122       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
123       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
124       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
125       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
126       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
127       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
128       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
129      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
130       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
131       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
132       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
133       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
134       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
135       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
136      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
137       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
138       .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
139       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
140      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
141       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
142       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
143       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
144       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
145       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
146       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
147       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
148       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
149       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
150       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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151     4
152     **
153     ** ANNUAL : INSPECT CATALYST & FUEL INLET ONLY
154     **              (NON-I/M AREAS ONLY)
155     **
156      1.00 1.00 1.00 1.00                                          EVAP/PCV
157      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
158       .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
159       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
160       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
161       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
162       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
163       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
164      0.95 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
165       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
166       .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
167       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
168      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
169       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
170       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
171       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
172       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
173       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
174       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
175       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
176       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
177       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
178       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
179      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
180       .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
181       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
182       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
183       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
184       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
185       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
186      0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
187       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
188       .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
189       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
190      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
191       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
192       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
193       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
194       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
195       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
196       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
197       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
198       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
199       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
200       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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201     4
202     **
203     ** ANNUAL : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
204     **              (NON-I/M AREAS ONLY)
205     **
206      1.00 1.00 1.00 1.00                                          EVAP/PCV
207      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
208       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
209       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
210       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
211       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
212       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
213       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
214      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
215       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
216       .00 0.63  .00 0.47  .00 0.62  .00  .00  .00 0.83  .00  NCK
217       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
218      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
219       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
220       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
221       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
222       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
223       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
224       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
225       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
226       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
227       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
228       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
229      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
230       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
231       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
232       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
233       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
234       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
235       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
236      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
237       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
238       .00 0.50  .00 0.50  .00 0.65  .00  .00  .00 0.70  .00  NCK
239       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
240      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
241       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
242       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
243       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
244       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
245       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
246       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
247       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
248       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
249       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
250       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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251     4
252     **
253     **
254     ** ANNUAL : INSPECT CATALYST  & FUEL INLET (AND PLUMBTESMO)
255     **
256      1.00 1.00 1.00 1.00                                          EVAP/PCV
257      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
258       .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
259       .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
260       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
261       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
262       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
263       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
264      0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
265       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
266       .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
267       .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
268      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
269       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
270       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
271       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
272       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
273       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
274       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
275       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
276       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
277       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
278       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
279      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
280       .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
281       .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
282       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
283       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
284       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
285       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
286      0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
287       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
288       .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
289       .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
290      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
291       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
292       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
293       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
294       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
295       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
296       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
297       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
298       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
299       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
300       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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301     4
302     **
303     **
304     ** ANNUAL : INSPECT AIR PUMP, CATALYST & FUEL INLET (AND PLUMBTESMO)
305     **
306      1.00 1.00 1.00 1.00                                          EVAP/PCV
307      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
308       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
309       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
310       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
311       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
312       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
313       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
314      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
315       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
316       .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  .00  NCK
317       .00  .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  TNK
318      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
319       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
320       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
321       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
322       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
323       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
324       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
325       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
326       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
327       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
328       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
329      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
330       .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
331       .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
332       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
333       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
334       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
335       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
336      0.15 0.05 0.05 0.05 0.05  .00  .00 0.20  .00  .00  .00  AIR
337       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
338       .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
339       .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
340      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
341       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
342       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
343       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
344       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
345       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
346       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
347       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
348       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
349       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
350       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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351     4
352     **
353     ** ANNUAL : INSPECT CATALYST & FUEL INLET ONLY
354     **              (I/M AREAS ONLY)
355     **
356      1.00 1.00 1.00 1.00                                          EVAP/PCV
357      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
358       .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
359       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
360       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
361       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
362       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
363       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
364      0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
365       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
366       .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
367       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
368      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
369       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
370       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
371       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
372       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
373       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
374       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
375       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
376       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
377       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
378       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
379      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
380       .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
381       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
382       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
383       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
384       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
385       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
386      0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
387       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
388       .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
389       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
390      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
391       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
392       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
393       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
394       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
395       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
396       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
397       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
398       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
399       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
400       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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401     4
402     **
403     ** ANNUAL : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
404     **              (I/M AREAS ONLY)
405     **
406      1.00 1.00 1.00 1.00                                          EVAP/PCV
407      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
408       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
409       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
410       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
411       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
412       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
413       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
414      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
415       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
416       .00 0.47  .00 0.21  .00 0.36  .00  .00  .00 0.67  .00  NCK
417       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
418      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
419       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
420       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
421       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
422       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
423       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
424       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
425       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
426       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
427       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
428       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
429      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
430       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
431       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
432       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
433       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
434       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
435       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
436      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
437       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
438       .00 0.10  .00 0.10  .00 0.25  .00  .00  .00 0.30  .00  NCK
439       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
440      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
441       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
442       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
443       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
444       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
445       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
446       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
447       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
448       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
449       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
450       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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451     4
452     **
453     **
454     ** ANNUAL : INSPECT AIR PUMP & CANISTER
455     **
456      0.30 1.00 0.30 1.00                                          EVAP/PCV
457      0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
458       .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
459       .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
460       .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
461       .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
462       .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
463       .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
464       .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
465      0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
466       .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
467       .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
468      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
469       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
470       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
471       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
472       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
473       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
474       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
475       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
476       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
477       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
478       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
479      0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
480       .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
481       .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
482       .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
483       .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
484       .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
485       .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
486       .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
487      0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
488       .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
489       .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
490      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
491       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
492       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
493       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
494       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
495       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
496       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
497       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
498       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
499       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
500       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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501     4
502     **
503     **
504     ** ANNUAL : INSPECT CATALYST & CANISTER
505     **
506      0.30 1.00 0.30 1.00                                          EVAP/PCV
507      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
508       .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
509       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
510       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
511       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
512       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
513       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
514      0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
515       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
516       .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
517       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
518      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
519       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
520       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
521       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
522       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
523       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
524       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
525       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
526       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
527       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
528       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
529      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
530       .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
531       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
532       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
533       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
534       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
535       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
536      0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
537       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
538       .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
539       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
540      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
541       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
542       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
543       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
544       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
545       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
546       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
547       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
548       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
549       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
550       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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551     4
552     **
553     **
554     ** ANNUAL : INSPECT AIR PUMP, CATALYST & CANISTER
555     **
556      0.30 1.00 0.30 1.00                                          EVAP/PCV
557      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
558       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
559       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
560       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
561       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
562       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
563       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
564      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
565       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
566       .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
567       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
568      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
569       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
570       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
571       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
572       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
573       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
574       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
575       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
576       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
577       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
578       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
579      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
580       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
581       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
582       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
583       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
584       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
585       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
586      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
587       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
588       .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
589       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
590      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
591       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
592       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
593       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
594       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
595       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
596       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
597       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
598       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
599       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
600       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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601     4
602     **
603     ** ANNUAL : INSPECT CATALYST, FUEL INLET & CANISTER
604     **              (NON-I/M AREAS ONLY)
605     **
606      0.30 1.00 0.30 1.00                                          EVAP/PCV
607      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
608       .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
609       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
610       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
611       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
612       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
613       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
614      0.95 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
615       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
616       .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
617       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
618      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
619       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
620       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
621       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
622       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
623       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
624       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
625       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
626       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
627       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
628       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
629      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
630       .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
631       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
632       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
633       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
634       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
635       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
636      0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
637       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
638       .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
639       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
640      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
641       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
642       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
643       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
644       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
645       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
646       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
647       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
648       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
649       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
650       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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651     4
652     **
653     ** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & CANISTER
654     **              (NON-I/M AREAS ONLY)
655     **
656      0.30 1.00 0.30 1.00                                          EVAP/PCV
657      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
658       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
659       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
660       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
661       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
662       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
663       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
664      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
665       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
666       .00 0.63  .00 0.47  .00 0.62  .00  .00  .00 0.83  .00  NCK
667       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
668      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
669       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
670       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
671       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
672       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
673       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
674       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
675       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
676       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
677       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
678       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
679      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
680       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
681       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
682       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
683       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
684       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
685       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
686      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
687       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
688       .00 0.50  .00 0.50  .00 0.65  .00  .00  .00 0.70  .00  NCK
689       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
690      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
691       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
692       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
693       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
694       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
695       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
696       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
697       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
698       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
699       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
700       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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701    4
702    **
703    **
704    ** ANNUAL : INSPECT CATALYST, FUEL INLET (AND PLUMBTESMO) & CANISTER
705    **
706     0.30 1.00 0.30 1.00                                          EVAP/PCV
707     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
708      .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
709      .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
710      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
711      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
712      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
713      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
714     0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
715      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
716      .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
717      .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
718     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
719      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
720      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
721      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
722      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
723      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
724      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
725      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
726      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
727      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
728      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
729     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
730      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
731      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
732      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
733      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
734      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
735      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
736     0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
737      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
738      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
739      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
740     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
741      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
742      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
743      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
744      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
745      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
746      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
747      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
748      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
749      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
750      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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751    4
752    **
753    ** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET (AND PLUMBTESMO)
754    **          & CANISTER
755    **
756     0.30 1.00 0.30 1.00                                          EVAP/PCV
757     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
758      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
759      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
760      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
761      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
762      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
763      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
764     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
765      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
766      .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  .00  NCK
767      .00  .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  TNK
768     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
769      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
770      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
771      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
772      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
773      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
774      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
775      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
776      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
777      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
778      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
779     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
780      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
781      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
782      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
783      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
784      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
785      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
786     0.15 0.05 0.05 0.05 0.05  .00  .00 0.20  .00  .00  .00  AIR
787      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
788      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
789      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
790     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
791      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
792      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
793      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
794      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
795      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
796      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
797      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
798      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
799      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
800      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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801     4
802     **
803     ** ANNUAL : INSPECT CATALYST, FUEL INLET & CANISTER
804     **              (I/M AREAS ONLY)
805     **
806      0.30 1.00 0.30 1.00                                          EVAP/PCV
807      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
808       .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
809       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
810       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
811       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
812       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
813       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
814      0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
815       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
816       .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
817       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
818      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
819       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
820       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
821       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
822       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
823       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
824       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
825       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
826       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
827       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
828       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
829      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
830       .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
831       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
832       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
833       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
834       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
835       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
836      0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
837       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
838       .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
839       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
840      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
841       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
842       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
843       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
844       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
845       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
846       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
847       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
848       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
849       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
850       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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851     4
852     **
853     ** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & CANISTER
854     **              (I/M AREAS ONLY)
855     **
856      0.30 1.00 0.30 1.00                                          EVAP/PCV
857      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
858       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
859       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
860       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
861       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
862       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
863       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
864      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
865       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
866       .00 0.47  .00 0.21  .00 0.36  .00  .00  .00 0.67  .00  NCK
867       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
868      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
869       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
870       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
871       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
872       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
873       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
874       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
875       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
876       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
877       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
878       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
879      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
880       .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
881       .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
882       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
883       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
884       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
885       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
886      0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
887       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
888       .00 0.10  .00 0.10  .00 0.25  .00  .00  .00 0.30  .00  NCK
889       .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
890      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
891       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
892       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
893       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
894       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
895       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
896       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
897       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
898       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
899       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
900       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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901     4
902     **
903     **
904     ** ANNUAL : INSPECT AIR PUMP & PCV
905     **
906      1.00 0.30 1.00 0.30                                          EVAP/PCV
907      0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
908       .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
909       .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
910       .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
911       .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
912       .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
913       .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
914       .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
915      0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
916       .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
917       .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
918      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
919       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
920       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
921       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
922       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
923       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
924       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
925       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
926       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
927       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
928       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
929      0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
930       .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
931       .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
932       .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
933       .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
934       .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
935       .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
936       .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
937      0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
938       .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
939       .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
940      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
941       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
942       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
943       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
944       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
945       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
946       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
947       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
948       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
949       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
950       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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951     4
952     **
953     **
954     ** ANNUAL : INSPECT CATALYST & PCV
955     **
956      1.00 0.30 1.00 0.30                                          EVAP/PCV
957      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
958       .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
959       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
960       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
961       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
962       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
963       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
964      0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
965       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
966       .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
967       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
968      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
969       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
970       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
971       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
972       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
973       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
974       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
975       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
976       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
977       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
978       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
979      0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
980       .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
981       .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
982       .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
983       .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
984       .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
985       .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
986      0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
987       .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
988       .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
989       .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
990      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
991       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
992       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
993       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
994       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
995       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
996       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
997       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
998       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
999       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1000      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1001    4
1002    **
1003    **
1004    ** ANNUAL : INSPECT AIR PUMP, CATALYST & PCV
1005    **
1006     1.00 0.30 1.00 0.30                                          EVAP/PCV
1007     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1008      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1009      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1010      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1011      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1012      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1013      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1014     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1015      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1016      .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
1017      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1018     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1019      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1020      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1021      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1022      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1023      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1024      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1025      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1026      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1027      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1028      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1029     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1030      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1031      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1032      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1033      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1034      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1035      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1036     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1037      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1038      .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
1039      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1040     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1041      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1042      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1043      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1044      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1045      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1046      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1047      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1048      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1049      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1050      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** ANNUAL : INSPECT CATALYST, FUEL INLET & PCV
**                (NON-I/M AREAS ONLY)
**
 1.00 0.30 1.00 0.30                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1101    4
1102    **
1103    ** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & PCV
1104    **              (NON-I/M AREAS ONLY)
1105    **
1106     1.00 0.30 1.00 0.30                                          EVAP/PCV
1107     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1108      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1109      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1110      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1111      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1112      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1113      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1114     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1115      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1116      .00 0.63  .00 0.47  .00 0.62  .00  .00  .00 0.83  .00  NCK
1117      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1118     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1119      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1120      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1121      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1122      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1123      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1124      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1125      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1126      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1127      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1128      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1129     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1130      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1131      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1132      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1133      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1134      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1135      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1136     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1137      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1138      .00 0.50  .00 0.50  .00 0.65  .00  .00  .00 0.70  .00  NCK
1139      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1140     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1141      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1142      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1143      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1144      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1145      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1146      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1147      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1148      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1149      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1150      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1151    4
1152    **
1153    **
1154    ** ANNUAL : INSPECT CATALYST, FUEL INLET (AND PLUMBTESMO) & PCV
1155    **
1156     1.00 0.30 1.00 0.30                                          EVAP/PCV
1157     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1158      .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1159      .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
1160      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1161      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1162      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1163      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1164     0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
1165      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1166      .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
1167      .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
1168     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1169      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1170      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1171      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1172      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1173      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1174      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1175      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1176      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1177      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1178      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1179     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
1180      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1181      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
1182      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1183      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1184      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1185      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1186     0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
1187      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1188      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
1189      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
1190     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1191      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1192      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1193      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1194      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1195      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1196      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1197      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1198      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1199      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1200      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1201    4
1202    **
1203    ** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET (AND PLUMBTESMO)
1204    **          & PCV
1205    **
1206     1.00 0.30 1.00 0.30                                          EVAP/PCV
1207     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
1208      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1209      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1210      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1211      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1212      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1213      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1214     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1215      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1216      .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  .00  NCK
1217      .00  .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  TNK
1218     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
1219      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1220      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1221      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1222      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1223      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1224      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1225      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1226      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1227      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1228      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1229     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
1230      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1231      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
1232      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1233      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1234      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1235      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1236     0.15 0.05 0.05 0.05 0.05  .00  .00 0.20  .00  .00  .00  AIR
1237      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1238      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
1239      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
1240     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
1241      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1242      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1243      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1244      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1245      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1246      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1247      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1248      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1249      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1250      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** ANNUAL : INSPECT CATALYST, FUEL INLET & PCV
**                (I/M AREAS ONLY)
**
 1.00 0.30 1.00 0.30                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

```
4
**
** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & PCV
**              (I/M AREAS ONLY)
**
 1.00 0.30 1.00 0.30                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.47  .00 0.21  .00 0.36  .00  .00  .00 0.67  .00  NCK
  .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.10  .00 0.10  .00 0.25  .00  .00  .00 0.30  .00  NCK
  .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

```
4
**
**
** ANNUAL : INSPECT AIR PUMP, CANISTER & PCV
**
 0.30 0.30 0.30 0.30                                                EVAP/PCV
 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.80  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.80  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

```
4
**
**
** ANNUAL : INSPECT CATALYST, CANISTER & PCV
**
 0.30 0.30 0.30 0.30                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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1451    4
1452    **
1453    **
1454    ** ANNUAL : INSPECT AIR PUMP, CATALYST, CANISTER & PCV
1455    **
1456     0.30 0.30 0.30 0.30                                          EVAP/PCV
1457     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1458      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1459      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1460      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1461      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1462      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1463      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1464     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1465      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1466      .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
1467      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1468     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1469      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1470      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1471      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1472      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1473      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1474      .00  .00  .00  .00   00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1475      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1476      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1477      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1478      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1479     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1480      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1481      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1482      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1483      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1484      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1485      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1486     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1487      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1488      .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  .00  NCK
1489      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1490     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1491      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1492      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1493      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1494      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1495      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1496      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1497      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1498      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1499      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1500      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1501    4
1502    **
1503    ** ANNUAL : INSPECT CATALYST, FUEL INLET, CANISTER & PCV
1504    **              (NON-I/M AREAS ONLY)
1505    **
1506     0.30 0.30 0.30 0.30                                          EVAP/PCV
1507     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1508      .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1509      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
1510      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1511      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1512      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1513      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1514     0.95 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
1515      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1516      .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
1517      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
1518     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1519      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1520      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1521      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1522      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1523      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1524      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1525      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1526      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1527      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1528      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1529     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
1530      .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1531      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
1532      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1533      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1534      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1535      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1536     0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
1537      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1538      .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
1539      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
1540     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1541      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1542      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1543      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1544      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1545      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1546      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1547      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1548      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1549      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1550      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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1551    4
1552    **
1553    ** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET, CANISTER & PCV
1554    **              (NON-I/M AREAS ONLY)
1555    **
1556     0.30 0.30 0.30 0.30                                          EVAP/PCV
1557     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1558      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1559      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1560      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1561      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1562      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1563      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1564     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1565      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1566      .00 0.63  .00 0.47  .00 0.62  .00  .00  .00 0.83  .00  NCK
1567      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1568     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1569      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1570      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1571      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1572      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1573      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1574      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1575      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1576      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1577      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1578      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1579     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1580      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1581      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1582      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1583      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1584      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1585      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1586     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1587      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1588      .00 0.50  .00 0.50  .00 0.65  .00  .00  .00 0.70  .00  NCK
1589      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1590     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1591      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1592      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1593      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1594      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1595      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1596      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1597      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1598      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1599      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1600      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
** ANNUAL : INSPECT CATALYST, FUEL INLET (AND PLUMBTESMO),
**          CANISTER & PCV
**
 0.30 0.30 0.30 0.30                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
  .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET (AND PLUMBTESMO),
**          CANISTER & PCV
**
 0.30 0.30 0.30 0.30                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  .00  NCK
  .00  .00 0.05  .00 0.05  .00 0.20  .00  .00  .00 0.25  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.15 0.05 0.05 0.05 0.05  .00  .00 0.20  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
  .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1701    4
1702    **
1703    ** ANNUAL : INSPECT CATALYST, FUEL INLET, CANISTER & PCV
1704    **              (I/M AREAS ONLY)
1705    **
1706     0.30 0.30 0.30 0.30                                          EVAP/PCV
1707     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1708      .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1709      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
1710      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1711      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1712      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1713      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1714     0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
1715      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1716      .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
1717      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
1718     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1719      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1720      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1721      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1722      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1723      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1724      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1725      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1726      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1727      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1728      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1729     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
1730      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1731      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
1732      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1733      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1734      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1735      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1736     0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
1737      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1738      .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
1739      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
1740     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1741      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1742      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1743      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1744      .00  .00  .00   00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1745      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1746      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1747      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1748      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1749      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1750      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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1751    4
1752    **
1753    ** ANNUAL : INSPECT AIR PUMP, CATALYST, FUEL INLET, CANISTER & PCV
1754    **              (I/M AREAS ONLY)
1755    **
1756     0.30 0.30 0.30 0.30                                          EVAP/PCV
1757     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
1758      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1759      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1760      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1761      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1762      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1763      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1764     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1765      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1766      .00 0.47  .00 0.21  .00 0.36  .00  .00  .00 0.67  .00  NCK
1767      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1768     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
1769      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1770      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1771      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1772      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1773      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1774      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1775      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1776      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1777      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1778      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1779     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
1780      .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1781      .00  .00 0.20  .00 0.15  .00  .00  .00  .00  .00  .00  AIR/TNK
1782      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1783      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1784      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1785      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1786     0.15  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00  AIR
1787      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1788      .00 0.10  .00 0.10  .00 0.25  .00  .00  .00 0.30  .00  NCK
1789      .00  .00 0.80  .00 0.80  .00 0.95  .00  .00  .00 1.00  TNK
1790     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
1791      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1792      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1793      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1794      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1795      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1796      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1797      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1798      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1799      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1800      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
**
** BIENNIAL : INSPECT AIR PUMP ONLY
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
**
** BIENNIAL : INSPECT CATALYST ONLY
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1901    4
1902    **
1903    **
1904    ** BIENNIAL : INSPECT AIR PUMP & CATALYST ONLY
1905    **
1906     1.00 1.00 1.00 1.00                                          EVAP/PCV
1907     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
1908      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1909      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
1910      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1911      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1912      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1913      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1914     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
1915      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1916      .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
1917      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
1918     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
1919      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1920      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1921      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1922      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1923      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1924      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1925      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1926      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1927      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1928      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1929     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
1930      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1931      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
1932      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1933      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1934      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1935      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1936     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
1937      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1938      .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
1939      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
1940     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
1941      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1942      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1943      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1944      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1945      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1946      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1947      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1948      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1949      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1950      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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1951    4
1952    **
1953    ** BIENNIAL : INSPECT CATALYST & FUEL INLET ONLY
1954    **                (NON-I/M AREAS ONLY)
1955    **
1956     1.00 1.00 1.00 1.00                                          EVAP/PCV
1957     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
1958      .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1959      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
1960      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1961      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1962      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1963      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1964     0.95 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
1965      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1966      .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
1967      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
1968     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
1969      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1970      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1971      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1972      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1973      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1974      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1975      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1976      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1977      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
1978      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
1979     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
1980      .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
1981      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
1982      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
1983      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
1984      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
1985      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
1986     0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
1987      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
1988      .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
1989      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
1990     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
1991      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
1992      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
1993      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
1994      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
1995      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
1996      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
1997      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
1998      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
1999      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2000      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2001    4
2002    **
2003    ** BIENNIAL : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
2004    **                (NON-I/M AREAS ONLY)
2005    **
2006     1.00 1.00 1.00 1.00                                          EVAP/PCV
2007     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2008      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2009      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2010      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2011      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2012      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2013      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2014     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2015      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2016      .00 0.53  .00 0.53  .00 0.62  .00  .00  .00 0.83  .00  NCK
2017      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2018     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2019      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2020      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2021      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2022      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2023      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2024      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2025      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2026      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2027      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2028      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2029     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2030      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2031      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2032      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2033      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2034      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2035      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2036     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2037      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2038      .00 0.40  .00 0.40  .00 0.65  .00  .00  .00 0.70  .00  NCK
2039      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2040     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2041      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2042      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2043      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2044      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2045      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2046      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2047      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2048      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2049      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2050      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2051    4
2052    **
2053    **
2054    ** BIENNIAL : INSPECT CATALYST  & FUEL INLET (AND PLUMBTESMO)
2055    **
2056     1.00 1.00 1.00 1.00                                          EVAP/PCV
2057     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2058      .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2059      .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
2060      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2061      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2062      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2063      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2064     0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
2065      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2066      .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
2067      .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
2068     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
2069      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2070      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2071      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2072      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2073      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2074      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2075      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2076      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2077      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2078      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2079     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
2080      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2081      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
2082      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2083      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2084      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2085      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2086     0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
2087      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2088      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
2089      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
2090     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
2091      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2092      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2093      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2094      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2095      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2096      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2097      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2098      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2099      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2100      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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**
** BIENNIAL : INSPECT AIR PUMP, CATALYST & FUEL INLET (AND PLUMBTESMO)
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25 0.05 0.05 0.05 0.05  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25 0.15 0.15 0.15 0.15  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
  .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2151    4
2152    **
2153    ** BIENNIAL : INSPECT CATALYST & FUEL INLET ONLY
2154    **                (I/M AREAS ONLY)
2155    **
2156     1.00 1.00 1.00 1.00                                          EVAP/PCV
2157     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2158      .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2159      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2160      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2161      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2162      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2163      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2164     0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
2165      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2166      .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
2167      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2168     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
2169      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2170      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2171      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2172      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2173      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2174      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2175      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2176      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2177      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2178      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2179     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
2180      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2181      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2182      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2183      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2184      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2185      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2186     0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
2187      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2188      .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
2189      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2190     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
2191      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2192      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2193      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2194      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2195      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2196      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2197      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2198      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2199      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2200      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2201    4
2202    **
2203    ** BIENNIAL : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
2204    **                (I/M AREAS ONLY)
2205    **
2206     1.00 1.00 1.00 1.00                                          EVAP/PCV
2207     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2208      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2209      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2210      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2211      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2212      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2213      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2214     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2215      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2216      .00 0.37  .00 0.11  .00 0.36  .00  .00  .00 0.67  .00  NCK
2217      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2218     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2219      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2220      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2221      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2222      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2223      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2224      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2225      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2226      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2227      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2228      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2229     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2230      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2231      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2232      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2233      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2234      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2235      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2236     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2237      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2238      .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
2239      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2240     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2241      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2242      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2243      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2244      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2245      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2246      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2247      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2248      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2249      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2250      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2251    4
2252    **
2253    **
2254    ** BIENNIAL : INSPECT AIR PUMP & CANISTER
2255    **
2256     0.43 1.00 0.43 1.00                                          EVAP/PCV
2257     0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2258      .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2259      .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
2260      .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2261      .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2262      .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2263      .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
2264      .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2265     0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2266      .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2267      .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2268     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2269      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2270      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2271      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2272      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2273      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2274      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2275      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2276      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2277      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2278      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2279     0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
2280      .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2281      .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
2282      .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2283      .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2284      .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2285      .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
2286      .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2287     0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2288      .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2289      .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2290     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2291      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2292      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2293      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2294      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2295      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2296      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2297      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2298      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2299      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2300      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2301    4
2302    **
2303    **
2304    ** BIENNIAL : INSPECT CATALYST & CANISTER
2305    **
2306     0.43 1.00 0.43 1.00                                          EVAP/PCV
2307     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2308      .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2309      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2310      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2311      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2312      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2313      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2314     0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
2315      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2316      .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
2317      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2318     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2319      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2320      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2321      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2322      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2323      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2324      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2325      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2326      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2327      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2328      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2329     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
2330      .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2331      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2332      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2333      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2334      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2335      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2336     0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
2337      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2338      .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
2339      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2340     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2341      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2342      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2343      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2344      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2345      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2346      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2347      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2348      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2349      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2350      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
**
** BIENNIAL : INSPECT AIR PUMP, CATALYST & CANISTER
**
 0.43 1.00 0.43 1.00                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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2401    4
2402    **
2403    ** BIENNIAL : INSPECT CATALYST, FUEL INLET & CANISTER
2404    **                  (NON-I/M AREAS ONLY)
2405    **
2406     0.43 1.00 0.43 1.00                                          EVAP/PCV
2407     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2408      .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2409      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2410      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2411      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2412      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2413      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2414     0.95 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
2415      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2416      .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
2417      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2418     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2419      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2420      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2421      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2422      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2423      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2424      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2425      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2426      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2427      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2428      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2429     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
2430      .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2431      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2432      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2433      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2434      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2435      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2436     0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
2437      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2438      .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
2439      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2440     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2441      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2442      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2443      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2444      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2445      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2446      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2447      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2448      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2449      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2450      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2451    4
2452    **
2453    ** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & CANISTER
2454    **                  (NON-I/M AREAS ONLY)
2455    **
2456     0.43 1.00 0.43 1.00                                          EVAP/PCV
2457     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2458      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2459      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2460      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2461      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2462      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2463      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2464     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2465      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2466      .00 0.53  .00 0.53  .00 0.62  .00  .00  .00 0.83  .00  NCK
2467      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2468     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2469      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2470      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2471      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2472      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2473      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2474      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2475      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2476      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2477      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2478      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2479     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2480      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2481      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2482      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2483      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2484      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2485      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2486     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2487      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2488      .00 0.40  .00 0.40  .00 0.65  .00  .00  .00 0.70  .00  NCK
2489      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2490     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2491      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2492      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2493      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2494      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2495      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2496      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2497      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2498      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2499      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2500      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2501    4
2502    **
2503    ** BIENNIAL : INSPECT CATALYST, FUEL INLET (AND PLUMBTESMO),
2504    **             & CANISTER
2505    **
2506     0.43 1.00 0.43 1.00                                          EVAP/PCV
2507     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2508      .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2509      .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
2510      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2511      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2512      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2513      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2514     0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
2515      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2516      .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
2517      .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
2518     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2519      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2520      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2521      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2522      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2523      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2524      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2525      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2526      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2527      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2528      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2529     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
2530      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2531      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
2532      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2533      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2534      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2535      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2536     0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
2537      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2538      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
2539      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
2540     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2541      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2542      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2543      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2544      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2545      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2546      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2547      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2548      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2549      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2550      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET (AND PLUMBTESMO),
**            & CANISTER
**
 0.43 1.00 0.43 1.00                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25 0.05 0.05 0.05 0.05  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00   00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25 0.15 0.15 0.15 0.15  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
  .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2601    4
2602    **
2603    ** BIENNIAL : INSPECT CATALYST, FUEL INLET & CANISTER
2604    **                (I/M AREAS ONLY)
2605    **
2606     0.43 1.00 0.43 1.00                                          EVAP/PCV
2607     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2608      .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2609      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2610      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2611      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2612      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2613      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2614     0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
2615      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2616      .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
2617      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2618     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
2619      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2620      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2621      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2622      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2623      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2624      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2625      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2626      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2627      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2628      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2629     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
2630      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2631      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2632      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2633      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2634      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2635      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2636     0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
2637      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2638      .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
2639      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2640     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
2641      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2642      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2643      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2644      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2645      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2646      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2647      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2648      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2649      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2650      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2651    4
2652    **
2653    ** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & CANISTER
2654    **                (I/M AREAS ONLY)
2655    **
2656     0.43 1.00 0.43 1.00                                          EVAP/PCV
2657     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2658      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2659      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2660      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2661      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2662      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2663      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2664     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2665      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2666      .00 0.37  .00 0.11  .00 0.36  .00  .00  .00 0.67  .00  NCK
2667      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2668     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
2669      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2670      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2671      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2672      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2673      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2674      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2675      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2676      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2677      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2678      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2679     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2680      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2681      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2682      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2683      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2684      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2685      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2686     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2687      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2688      .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
2689      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2690     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
2691      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2692      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2693      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2694      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2695      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2696      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2697      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2698      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2699      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2700      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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2701    4
2702    **
2703    **
2704    ** BIENNIAL : INSPECT AIR PUMP & PCV
2705    **
2706     1.00 0.44 1.00 0.44                                          EVAP/PCV
2707     0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2708      .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2709      .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
2710      .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2711      .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2712      .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2713      .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
2714      .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2715     0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2716      .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2717      .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2718     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
2719      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2720      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2721      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2722      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2723      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2724      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2725      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2726      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2727      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2728      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2729     0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
2730      .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2731      .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
2732      .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2733      .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2734      .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2735      .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
2736      .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2737     0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2738      .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2739      .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2740     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
2741      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2742      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2743      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2744      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2745      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2746      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2747      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2748      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2749      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2750      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
**
** BIENNIAL : INSPECT CATALYST & PCV
*
 1.00 0.44 1.00 0.44                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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2801    4
2802    **
2803    **
2804    ** BIENNIAL : INSPECT AIR PUMP, CATALYST & PCV
2805    **
2806     1.00 0.44 1.00 0.44                                    EVAP/PCV
2807     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2808      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2809      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2810      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2811      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2812      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2813      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2814     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2815      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2816      .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
2817      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2818     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
2819      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2820      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2821      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2822      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2823      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2824      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2825      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2826      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2827      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2828      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2829     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
2830      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2831      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
2832      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2833      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2834      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2835      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2836     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
2837      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2838      .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
2839      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
2840     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
2841      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2842      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2843      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2844      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2845      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2846      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2847      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2848      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2849      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2850      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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2851    4
2852    **
2853    ** BIENNIAL : INSPECT CATALYST, FUEL INLET & PCV
2854    **                 (NON-I/M AREAS ONLY)
2855    **
2856     1.00 0.44 1.00 0.44                                          EVAP/PCV
2857     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
2858      .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2859      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2860      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2861      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2862      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2863      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2864     0.95 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
2865      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2866      .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
2867      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2868     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
2869      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2870      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2871      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2872      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2873      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2874      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2875      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2876      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2877      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2878      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
2879     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
2880      .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
2881      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
2882      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
2883      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
2884      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
2885      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
2886     0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
2887      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
2888      .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
2889      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
2890     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
2891      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
2892      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
2893      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
2894      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
2895      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
2896      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
2897      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
2898      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
2899      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
2900      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & PCV
**                    (NON-I/M AREAS ONLY)
**
 1.00 0.44 1.00 0.44                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.53  .00 0.53  .00 0.62  .00  .00  .00 0.83  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.40  .00 0.40  .00 0.65  .00  .00  .00 0.70  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** BIENNIAL : INSPECT CATALYST, FUEL INLET (AND PLUMBTESMO),
**            & PCV
**
 1.00 0.44 1.00 0.44                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
  .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
  .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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3001    4
3002    **
3003    ** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET (AND PLUMBTESMO),
3004    **            & PCV
3005    **
3006     1.00 0.44 1.00 0.44                                          EVAP/PCV
3007     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
3008      .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3009      .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
3010      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3011      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3012      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3013      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3014     0.25 0.05 0.05 0.05 0.05  .00  .00 0.30  .00  .00  .00  AIR
3015      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3016      .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
3017      .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
3018     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
3019      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3020      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3021      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3022      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3023      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3024      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3025      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3026      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3027      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3028      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3029     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
3030      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3031      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
3032      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3033      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3034      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3035      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3036     0.25 0.15 0.15 0.15 0.15  .00  .00 0.30  .00  .00  .00  AIR
3037      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3038      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
3039      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
3040     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
3041      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3042      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3043      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3044      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3045      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3046      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3047      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3048      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3049      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3050      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
** BIENNIAL : INSPECT CATALYST, FUEL INLET & PCV
**                (I/M AREAS ONLY)
**
 1.00 0.44 1.00 0.44                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET & PCV
**                (I/M AREAS ONLY)
**
 1.00 0.44 1.00 0.44                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.37  .00 0.11  .00 0.36  .00  .00  .00 0.67  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

```
4
**
**
** BIENNIAL : INSPECT AIR PUMP, CANISTER & PCV
**
 0.43 0.44 0.43 0.44                                                EVAP/PCV
 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

```
4
**
**
** BIENNIAL : INSPECT CATALYST, CANISTER & PCV
**
 0.43 0.44 0.43 0.44                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

```
4
**
**
** BIENNIAL : INSPECT AIR PUMP, CATALYST, CANISTER & PCV
**
 0.43 0.44 0.43 0.44                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3301    4
3302    **
3303    ** BIENNIAL : INSPECT CATALYST, FUEL INLET, CANISTER & PCV
3304    **                  (NON-I/M AREAS ONLY)
3305    **
3306     0.43 0.44 0.43 0.44                                          EVAP/PCV
3307     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
3308      .00 0.83  .00 0.62  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3309      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
3310      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3311      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3312      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3313      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3314     0.55 0.17  .00 0.33  .00  .00  .00 1.00  .00  .00  .00  AIR
3315      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3316      .00  .00  .00  .00  .00 0.62  .00  .00  .00 0.83  .00  NCK
3317      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
3318     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
3319      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3320      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3321      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3322      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3323      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3324      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3325      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3326      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3327      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3328      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3329     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
3330      .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3331      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
3332      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3333      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3334      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3335      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3336     0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
3337      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3338      .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
3339      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
3340     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
3341      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3342      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3343      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3344      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3345      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3346      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3347      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3348      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3349      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3350      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET, CANISTER & PCV
**                    (NON-I/M AREAS ONLY)
**
 0.43 0.44 0.43 0.44                                                EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.53  .00 0.53  .00 0.62  .00  .00  .00 0.83  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.40  .00 0.40  .00 0.65  .00  .00  .00 0.70  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3401    4
3402    **
3403    ** BIENNIAL : INSPECT CATALYST, FUEL INLET (AND PLUMBTESMO),
3404    **             CANISTER & PCV
3405    **
3406     0.43 0.44 0.43 0.44                                          EVAP/PCV
3407     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
3408      .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3409      .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
3410      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3411      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3412      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3413      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3414     0.95 0.75 0.75 0.75 0.75  .00  .00 1.00  .00  .00  .00  AIR
3415      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3416      .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
3417      .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
3418     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
3419      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3420      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3421      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3422      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3423      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3424      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3425      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3426      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3427      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3428      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3429     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
3430      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3431      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
3432      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3433      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3434      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3435      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3436     0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
3437      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3438      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
3439      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
3440     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
3441      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3442      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3443      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3444      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3445      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3446      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3447      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3448      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3449      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3450      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3451    4
3452    **
3453    ** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET (AND PLUMBTESMO),
3454    **             CANISTER & PCV
3455    **
3456     0.43 0.44 0.43 0.44                                          EVAP/PCV
3457     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
3458      .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3459      .00  .00 0.25  .00 0.20  .00  .00  .00  .00  .00  .00  AIR/TNK
3460      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3461      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3462      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3463      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3464     0.25 0.05 0.05 0.05 0.05  .00  .00 0.30  .00  .00  .00  AIR
3465      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3466      .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  .00  NCK
3467      .00  .00  .00  .00  .00  .00 0.20  .00  .00  .00 0.25  TNK
3468     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
3469      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3470      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3471      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3472      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3473      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3474      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3475      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3476      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3477      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3478      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3479     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
3480      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3481      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
3482      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3483      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3484      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3485      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3486     0.25 0.15 0.15 0.15 0.15  .00  .00 0.30  .00  .00  .00  AIR
3487      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3488      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
3489      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
3490     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
3491      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3492      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3493      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3494      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3495      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3496      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3497      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3498      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3499      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3500      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** BIENNIAL : INSPECT CATALYST, FUEL INLET, CANISTER & PCV
**                (I/M AREAS ONLY)
**
 0.43 0.44 0.43 0.44                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.67  .00 0.36  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.33  .00 0.59  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.36  .00  .00  .00 0.67  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00   00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
** BIENNIAL : INSPECT AIR PUMP, CATALYST, FUEL INLET, CANISTER & PCV
**                (I/M AREAS ONLY)
**
 0.43 0.44 0.43 0.44                                          EVAP/PCV
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.37  .00 0.11  .00 0.36  .00  .00  .00 0.67  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
**
** CHNG-OF-OWN : INSPECT AIR PUMP ONLY
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.66  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.66  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.66  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.66  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.66  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.34  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.34  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.66  .00  .00  .00  AIR
 0.34  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.34  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.34  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.30  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00 0.70  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
**
** CHNG-OF-OWN : INSPECT CATALYST ONLY
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 1.00  .00 0.46  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.46  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
 0.46  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
  .00  .00  .00  .00  .00 0.46  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.46  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.95  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
**
** CHNG-OF-OWN : INSPECT AIR PUMP & CATALYST ONLY
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.66  .00 0.12  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.66  .00 0.12  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
 0.12  .00  .00  .00  .00  .00  .00 0.66  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
  .00 0.34  .00 0.34  .00 0.46  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.34  .00 0.34  .00 0.46  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
 0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  .00  NCK
  .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3751    4
3752    **
3753    ** CHNG-OF-OWN : INSPECT CATALYST & FUEL INLET ONLY
3754    **                (NON-I/M AREAS ONLY)
3755    **
3756     1.00 1.00 1.00 1.00                                          EVAP/PCV
3757     0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
3758      .00 0.92  .00 0.30  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3759      .00  .00 1.00  .00 0.46  .00  .00  .00  .00  .00  .00  AIR/TNK
3760      .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3761      .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3762      .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
3763      .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
3764     0.46 0.08  .00 0.16  .00  .00  .00 1.00  .00  .00  .00  AIR
3765      .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
3766      .00  .00  .00  .00  .00 0.30  .00  .00  .00 0.92  .00  NCK
3767      .00  .00  .00  .00  .00  .00 0.46  .00  .00  .00 1.00  TNK
3768     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
3769      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3770      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3771      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3772      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3773      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3774      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3775      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3776      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3777      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3778      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3779     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
3780      .00 0.70  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3781      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
3782      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3783      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3784      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3785      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3786     0.95 0.30  .00 0.30  .00  .00  .00 1.00  .00  .00  .00  AIR
3787      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3788      .00  .00  .00  .00  .00 0.65  .00  .00  .00 0.70  .00  NCK
3789      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
3790     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
3791      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3792      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3793      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3794      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3795      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3796      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3797      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3798      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3799      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3800      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3801    4
3802    **
3803    ** CHNG-OF-OWN : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
3804    **                (NON-I/M AREAS ONLY)
3805    **
3806     1.00 1.00 1.00 1.00                                          EVAP/PCV
3807     0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
3808      .00 0.66  .00 0.12  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3809      .00  .00 0.66  .00 0.12  .00  .00  .00  .00  .00  .00  AIR/TNK
3810      .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3811      .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3812      .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
3813      .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
3814     0.12  .00  .00  .00  .00  .00  .00 0.66  .00  .00  .00  AIR
3815      .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
3816      .00 0.26  .00 0.26  .00 0.30  .00  .00  .00 0.92  .00  NCK
3817      .00  .00 0.34  .00 0.34  .00 0.46  .00  .00  .00 1.00  TNK
3818     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
3819      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3820      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3821      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3822      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3823      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3824      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3825      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3826      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3827      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3828      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3829     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
3830      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3831      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
3832      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3833      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3834      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3835      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3836     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
3837      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3838      .00 0.40  .00 0.40  .00 0.65  .00  .00  .00 0.70  .00  NCK
3839      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
3840     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
3841      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3842      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3843      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3844      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3845      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3846      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3847      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3848      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3849      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3850      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3851    4
3852    **
3853    **
3854    ** CHNG-OF-OWN : INSPECT CATALYST  & FUEL INLET (AND PLUMBTESMO)
3855    **
3856     1.00 1.00 1.00 1.00                                          EVAP/PCV
3857     0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
3858      .00 0.64  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3859      .00  .00 0.64  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
3860      .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3861      .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3862      .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
3863      .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
3864     0.46 0.36 0.36 0.36 0.36  .00  .00 1.00  .00  .00  .00  AIR
3865      .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
3866      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.64  .00  NCK
3867      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.64  TNK
3868     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
3869      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3870      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3871      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3872      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3873      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3874      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3875      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3876      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3877      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3878      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3879     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
3880      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3881      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
3882      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3883      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3884      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3885      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3886     0.95 0.85 0.85 0.85 0.85  .00  .00 1.00  .00  .00  .00  AIR
3887      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3888      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
3889      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
3890     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
3891      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3892      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3893      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3894      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3895      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3896      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3897      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3898      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3899      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3900      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3901    4
3902    **
3903    **
3904    ** CHNG-OF-OWN : INSPECT AIR PUMP, CATALYST & FUEL INLET (AND PLUMBTESMO)
3905    **
3906     1.00 1.00 1.00 1.00                                          EVAP/PCV
3907     0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
3908      .00 0.64  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3909      .00  .00 0.64  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
3910      .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3911      .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3912      .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
3913      .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
3914     0.12 0.02 0.02 0.02 0.02  .00  .00 0.66  .00  .00  .00  AIR
3915      .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
3916      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.64  .00  NCK
3917      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.64  TNK
3918     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
3919      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3920      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3921      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3922      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3923      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3924      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3925      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3926      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3927      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3928      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3929     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
3930      .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3931      .00  .00 0.15  .00 0.10  .00  .00  .00  .00  .00  .00  AIR/TNK
3932      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3933      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3934      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3935      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3936     0.25 0.15 0.15 0.15 0.15  .00  .00 0.30  .00  .00  .00  AIR
3937      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3938      .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  .00  NCK
3939      .00  .00  .00  .00  .00  .00 0.10  .00  .00  .00 0.15  TNK
3940     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
3941      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3942      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3943      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3944      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3945      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3946      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3947      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3948      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3949      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3950      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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3951    4
3952    **
3953    ** CHNG-OF-OWN : INSPECT CATALYST & FUEL INLET ONLY
3954    **              (I/M AREAS ONLY)
3955    **
3956     1.00 1.00 1.00 1.00                                          EVAP/PCV
3957     0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
3958      .00 0.84  .00 0.18  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3959      .00  .00 1.00  .00 0.46  .00  .00  .00  .00  .00  .00  AIR/TNK
3960      .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3961      .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3962      .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
3963      .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
3964     0.46 0.16  .00 0.28  .00  .00  .00 1.00  .00  .00  .00  AIR
3965      .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
3966      .00  .00  .00  .00  .00 0.18  .00  .00  .00 0.84  .00  NCK
3967      .00  .00  .00  .00  .00  .00 0.46  .00  .00  .00 1.00  TNK
3968     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
3969      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3970      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3971      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3972      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3973      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3974      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3975      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3976      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3977      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
3978      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
3979     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
3980      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
3981      .00  .00 1.00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/TNK
3982      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
3983      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
3984      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
3985      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
3986     0.95 0.70  .00 0.70  .00  .00  .00 1.00  .00  .00  .00  AIR
3987      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
3988      .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
3989      .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00 1.00  TNK
3990     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
3991      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
3992      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
3993      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
3994      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
3995      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
3996      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
3997      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
3998      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
3999      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4000      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4001    4
4002    **
4003    ** CHNG-OF-OWN : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
4004    **                (I/M AREAS ONLY)
4005    **
4006     1.00 1.00 1.00 1.00                                          EVAP/PCV
4007     0.54  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4008      .00 0.66  .00 0.12  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4009      .00  .00 0.66  .00 0.12  .00  .00  .00  .00  .00  .00  AIR/TNK
4010      .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4011      .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4012      .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  .00  CAT/NCK
4013      .00  .00  .00  .00  .00  .00 0.54  .00  .00  .00  .00  CAT/TNK
4014     0.12  .00  .00  .00  .00  .00  .00 0.66  .00  .00  .00  AIR
4015      .00  .00  .00  .00  .00  .00  .00  .00 0.54  .00  .00  CAT
4016      .00 0.18  .00 0.06  .00 0.18  .00  .00  .00 0.84  .00  NCK
4017      .00  .00 0.34  .00 0.34  .00 0.46  .00  .00  .00 1.00  TNK
4018     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4019      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4020      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4021      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4022      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4023      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4024      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4025      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4026      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4027      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4028      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4029     0.05  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4030      .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4031      .00  .00 0.30  .00 0.25  .00  .00  .00  .00  .00  .00  AIR/TNK
4032      .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4033      .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4034      .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  .00  CAT/NCK
4035      .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00  .00  CAT/TNK
4036     0.25  .00  .00  .00  .00  .00  .00 0.30  .00  .00  .00  AIR
4037      .00  .00  .00  .00  .00  .00  .00  .00 0.05  .00  .00  CAT
4038      .00  .00  .00  .00  .00 0.25  .00  .00  .00 0.30  .00  NCK
4039      .00  .00 0.70  .00 0.70  .00 0.95  .00  .00  .00 1.00  TNK
4040     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4041      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4042      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4043      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4044      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4045      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4046      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4047      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4048      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4049      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4050      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4051    4
4052    **
4053    **
4054    ** 1% AUDIT : INSPECT AIR PUMP ONLY
4055    **
4056     1.00 1.00 1.00 1.00                                          EVAP/PCV
4057     0.97  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4058      .00 0.97  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4059      .00  .00 0.97  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
4060      .00  .00  .00 0.97  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4061      .00  .00  .00  .00 0.97  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4062      .00  .00  .00 0.03  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4063      .00  .00  .00  .00 0.03  .00 1.00  .00  .00  .00  .00  CAT/TNK
4064      .00  .00  .00  .00  .00  .00  .00 0.97  .00  .00  .00  AIR
4065     0.03  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4066      .00 0.03  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4067      .00  .00 0.03  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4068     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4069      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4070      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4071      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4072      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4073      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4074      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4075      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4076      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4077      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4078      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4079     0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
4080      .00 0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4081      .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
4082      .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4083      .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4084      .00  .00  .00 0.18  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4085      .00  .00  .00  .00 0.18  .00 1.00  .00  .00  .00  .00  CAT/TNK
4086      .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  AIR
4087     0.18  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4088      .00 0.18  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4089      .00  .00 0.18  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4090     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4091      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4092      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4093      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4094      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4095      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4096      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4097      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4098      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4099      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4100      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4101    4
4102    **
4103    **
4104    ** 1% AUDIT : INSPECT CATALYST ONLY
4105    **
4106     1.00 1.00 1.00 1.00                                          EVAP/PCV
4107     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4108      .00 1.00  .00 0.04  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4109      .00  .00 1.00  .00 0.04  .00  .00  .00  .00  .00  .00  AIR/TNK
4110      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4111      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4112      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4113      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4114     0.04  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
4115      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4116      .00  .00  .00  .00  .00 0.04  .00  .00  .00 1.00  .00  NCK
4117      .00  .00  .00  .00  .00  .00 0.04  .00  .00  .00 1.00  TNK
4118     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4119      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4120      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4121      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4122      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4123      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4124      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4125      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4126      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4127      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4128      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4129     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
4130      .00 1.00  .00 0.24  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4131      .00  .00 1.00  .00 0.24  .00  .00  .00  .00  .00  .00  AIR/TNK
4132      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4133      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4134      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4135      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4136     0.24  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
4137      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4138      .00  .00  .00  .00  .00 0.24  .00  .00  .00 1.00  .00  NCK
4139      .00  .00  .00  .00  .00  .00 0.24  .00  .00  .00 1.00  TNK
4140     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4141      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4142      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4143      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4144      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4145      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4146      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4147      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4148      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4149      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4150      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4151    4
4152    **
4153    **
4154    ** 1% AUDIT : INSPECT AIR PUMP & CATALYST ONLY
4155    **
4156     1.00 1.00 1.00 1.00                                          EVAP/PCV
4157     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4158      .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4159      .00  .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  AIR/TNK
4160      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4161      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4162      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4163      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4164     0.01  .00  .00  .00  .00  .00  .00 0.97  .00  .00  .00  AIR
4165      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4166      .00 0.03  .00 0.03  .00 0.04  .00  .00  .00 1.00  .00  NCK
4167      .00  .00 0.03  .00 0.03  .00 0.04  .00  .00  .00 1.00  TNK
4168     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4169      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4170      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4171      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4172      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4173      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4174      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4175      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4176      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4177      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4178      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4179     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4180      .00 0.82  .00 0.06  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4181      .00  .00 0.82  .00 0.06  .00  .00  .00  .00  .00  .00  AIR/TNK
4182      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4183      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4184      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4185      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4186     0.06  .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  AIR
4187      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4188      .00 0.18  .00 0.18  .00 0.24  .00  .00  .00 1.00  .00  NCK
4189      .00  .00 0.18  .00 0.18  .00 0.24  .00  .00  .00 1.00  TNK
4190     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4191      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4192      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4193      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4194      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4195      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4196      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4197      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4198      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4199      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4200      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4201    4
4202    **
4203    ** 1% AUDIT : INSPECT CATALYST & FUEL INLET ONLY
4204    **                (NON-I/M AREAS ONLY)
4205    **
4206     1.00 1.00 1.00 1.00                                          EVAP/PCV
4207     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4208      .00 0.99  .00 0.03  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4209      .00  .00 1.00  .00 0.04  .00  .00  .00  .00  .00  .00  AIR/TNK
4210      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4211      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4212      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4213      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4214     0.04 0.01  .00 0.01  .00  .00  .00 1.00  .00  .00  .00  AIR
4215      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4216      .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.99  .00  NCK
4217      .00  .00  .00  .00  .00  .00 0.04  .00  .00  .00 1.00  TNK
4218     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4219      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4220      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4221      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4222      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4223      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4224      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4225      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4226      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4227      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4228      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4229     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
4230      .00 0.92  .00 0.16  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4231      .00  .00 1.00  .00 0.24  .00  .00  .00  .00  .00  .00  AIR/TNK
4232      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4233      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4234      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4235      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4236     0.24 0.08  .00 0.08  .00  .00  .00 1.00  .00  .00  .00  AIR
4237      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4238      .00  .00  .00  .00  .00 0.16  .00  .00  .00 0.92  .00  NCK
4239      .00  .00  .00  .00  .00  .00 0.24  .00  .00  .00 1.00  TNK
4240     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4241      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4242      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4243      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4244      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4245      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4246      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4247      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4248      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4249      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4250      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4251    4
4252    **
4253    ** 1% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
4254    **                (NON-I/M AREAS ONLY)
4255    **
4256     1.00 1.00 1.00 1.00                                          EVAP/PCV
4257     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4258      .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4259      .00  .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  AIR/TNK
4260      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4261      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4262      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4263      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4264     0.01  .00  .00  .00  .00  .00  .00 0.97  .00  .00  .00  AIR
4265      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4266      .00 0.02  .00 0.02  .00 0.03  .00  .00  .00 0.99  .00  NCK
4267      .00  .00 0.03  .00 0.03  .00 0.04  .00  .00  .00 1.00  TNK
4268     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4269      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4270      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4271      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4272      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4273      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4274      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4275      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4276      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4277      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4278      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4279     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4280      .00 0.82  .00 0.06  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4281      .00  .00 0.82  .00 0.06  .00  .00  .00  .00  .00  .00  AIR/TNK
4282      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4283      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4284      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4285      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4286     0.06  .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  AIR
4287      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4288      .00 0.10  .00 0.10  .00 0.16  .00  .00  .00 0.92  .00  NCK
4289      .00  .00 0.18  .00 0.18  .00 0.24  .00  .00  .00 1.00  TNK
4290     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4291      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4292      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4293      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4294      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4295      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4296      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4297      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4298      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4299      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4300      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4301    4
4302    **
4303    **
4304    ** 1% AUDIT : INSPECT CATALYST  & FUEL INLET (AND PLUMBTESMO)
4305    **
4306     1.00 1.00 1.00 1.00                                          EVAP/PCV
4307     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4308      .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4309      .00  .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  AIR/TNK
4310      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4311      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4312      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4313      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4314     0.04 0.03 0.03 0.03 0.03  .00  .00 1.00  .00  .00  .00  AIR
4315      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4316      .00  .00  .00  .00  .00 0.01  .00  .00  .00 0.97  .00  NCK
4317      .00  .00  .00  .00  .00  .00 0.01  .00  .00  .00 0.97  TNK
4318     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4319      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4320      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4321      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4322      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4323      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4324      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4325      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4326      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4327      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4328      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4329     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
4330      .00 0.79  .00 0.03  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4331      .00  .00 0.79  .00 0.03  .00  .00  .00  .00  .00  .00  AIR/TNK
4332      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4333      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4334      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4335      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4336     0.24 0.21 0.21 0.21 0.21  .00  .00 1.00  .00  .00  .00  AIR
4337      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4338      .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.79  .00  NCK
4339      .00  .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.79  TNK
4340     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4341      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4342      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4343      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4344      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4345      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4346      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4347      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4348      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4349      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4350      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4351    4
4352    **
4353    **
4354    ** 1% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET (AND PLUMBTESMO)
4355    **
4356     1.00 1.00 1.00 1.00                                          EVAP/PCV
4357     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4358      .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4359      .00  .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  AIR/TNK
4360      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4361      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4362      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4363      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4364     0.01  .00  .00  .00  .00  .00  .00 0.97  .00  .00  .00  AIR
4365      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4366      .00  .00  .00  .00  .00 0.01  .00  .00  .00 0.97  .00  NCK
4367      .00  .00  .00  .00  .00  .00 0.01  .00  .00  .00 0.97  TNK
4368     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4369      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4370      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4371      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4372      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4373      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4374      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4375      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4376      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4377      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4378      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4379     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
4380      .00 0.79  .00 0.03  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4381      .00  .00 0.79  .00 0.03  .00  .00  .00  .00  .00  .00  AIR/TNK
4382      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4383      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4384      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4385      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4386     0.06 0.03 0.03 0.03 0.03  .00  .00 0.82  .00  .00  .00  AIR
4387      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4388      .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.79  .00  NCK
4389      .00  .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.79  TNK
4390     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4391      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4392      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4393      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4394      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4395      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4396      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4397      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4398      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4399      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4400      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4401    4
4402    **
4403    ** 1% AUDIT : INSPECT CATALYST & FUEL INLET ONLY
4404    **                (I/M AREAS ONLY)
4405    **
4406     1.00 1.00 1.00 1.00                                          EVAP/PCV
4407     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4408      .00 0.99  .00 0.02  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4409      .00  .00 1.00  .00 0.04  .00  .00  .00  .00  .00  .00  AIR/TNK
4410      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4411      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4412      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4413      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4414     0.04 0.01  .00 0.02  .00  .00  .00 1.00  .00  .00  .00  AIR
4415      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4416      .00  .00  .00  .00  .00 0.02  .00  .00  .00 0.99  .00  NCK
4417      .00  .00  .00  .00  .00  .00 0.04  .00  .00  .00 1.00  TNK
4418     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4419      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4420      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4421      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4422      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4423      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4424      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4425      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4426      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4427      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4428      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4429     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
4430      .00 0.82  .00 0.06  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4431      .00  .00 1.00  .00 0.24  .00  .00  .00  .00  .00  .00  AIR/TNK
4432      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4433      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4434      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4435      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4436     0.24 0.18  .00 0.18  .00  .00  .00 1.00  .00  .00  .00  AIR
4437      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4438      .00  .00  .00  .00  .00 0.06  .00  .00  .00 0.82  .00  NCK
4439      .00  .00  .00  .00  .00  .00 0.24  .00  .00  .00 1.00  TNK
4440     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4441      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4442      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4443      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4444      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4445      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4446      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4447      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4448      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4449      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4450      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4451    4
4452    **
4453    ** 1% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
4454    **                (I/M AREAS ONLY)
4455    **
4456     1.00 1.00 1.00 1.00                                          EVAP/PCV
4457     0.96  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4458      .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4459      .00  .00 0.97  .00 0.01  .00  .00  .00  .00  .00  .00  AIR/TNK
4460      .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4461      .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4462      .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  .00  CAT/NCK
4463      .00  .00  .00  .00  .00  .00 0.96  .00  .00  .00  .00  CAT/TNK
4464     0.01  .00  .00  .00  .00  .00  .00 0.97  .00  .00  .00  AIR
4465      .00  .00  .00  .00  .00  .00  .00  .00 0.96  .00  .00  CAT
4466      .00 0.02  .00 0.01  .00 0.02  .00  .00  .00 0.99  .00  NCK
4467      .00  .00 0.03  .00 0.03  .00 0.04  .00  .00  .00 1.00  TNK
4468     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4469      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4470      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4471      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4472      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4473      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4474      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4475      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4476      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4477      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4478      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4479     0.76  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4480      .00 0.82  .00 0.06  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4481      .00  .00 0.82  .00 0.06  .00  .00  .00  .00  .00  .00  AIR/TNK
4482      .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4483      .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4484      .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  .00  CAT/NCK
4485      .00  .00  .00  .00  .00  .00 0.76  .00  .00  .00  .00  CAT/TNK
4486     0.06  .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  AIR
4487      .00  .00  .00  .00  .00  .00  .00  .00 0.76  .00  .00  CAT
4488      .00  .00  .00  .00  .00 0.06  .00  .00  .00 0.82  .00  NCK
4489      .00  .00 0.18  .00 0.18  .00 0.24  .00  .00  .00 1.00  TNK
4490     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4491      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4492      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4493      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4494      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4495      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4496      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4497      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4498      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4499      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4500      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4501    4
4502    **
4503    **
4504    ** 2% AUDIT : INSPECT AIR PUMP ONLY
4505    **
4506     1.00 1.00 1.00 1.00                                          EVAP/PCV
4507     0.95  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4508      .00 0.95  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4509      .00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
4510      .00  .00  .00 0.95  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4511      .00  .00  .00  .00 0.95  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4512      .00  .00  .00 0.05  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4513      .00  .00  .00  .00 0.05  .00 1.00  .00  .00  .00  .00  CAT/TNK
4514      .00  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00  AIR
4515     0.05  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4516      .00 0.05  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4517      .00  .00 0.05  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4518     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4519      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4520      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4521      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4522      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4523      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4524      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4525      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4526      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4527      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4528      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4529     0.75  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
4530      .00 0.75  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4531      .00  .00 0.75  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
4532      .00  .00  .00 0.75  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4533      .00  .00  .00  .00 0.75  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4534      .00  .00  .00 0.25  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4535      .00  .00  .00  .00 0.25  .00 1.00  .00  .00  .00  .00  CAT/TNK
4536      .00  .00  .00  .00  .00  .00  .00 0.75  .00  .00  .00  AIR
4537     0.25  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4538      .00 0.25  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4539      .00  .00 0.25  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4540     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4541      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4542      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4543      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4544      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4545      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4546      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4547      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4548      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4549      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4550      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
```

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4
**
**
** 2% AUDIT : INSPECT CATALYST ONLY
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 1.00  .00 0.07  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.07  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
 0.07  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
  .00  .00  .00  .00  .00 0.07  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.07  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
  .00 1.00  .00 0.33  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00 0.33  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
 0.33  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
  .00  .00  .00  .00  .00 0.33  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00 0.33  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4601    4
4602    **
4603    **
4604    ** 2% AUDIT : INSPECT AIR PUMP & CATALYST ONLY
4605    **
4606     1.00 1.00 1.00 1.00                                          EVAP/PCV
4607     0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4608      .00 0.95  .00 0.02  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4609      .00  .00 0.95  .00 0.02  .00  .00  .00  .00  .00  .00  AIR/TNK
4610      .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4611      .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4612      .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
4613      .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
4614     0.02  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00  AIR
4615      .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
4616      .00 0.05  .00 0.05  .00 0.07  .00  .00  .00 1.00  .00  NCK
4617      .00  .00 0.05  .00 0.05  .00 0.07  .00  .00  .00 1.00  TNK
4618     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4619      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4620      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4621      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4622      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4623      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4624      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4625      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4626      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4627      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4628      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4629     0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4630      .00 0.75  .00 0.08  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4631      .00  .00 0.75  .00 0.08  .00  .00  .00  .00  .00  .00  AIR/TNK
4632      .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4633      .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4634      .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
4635      .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
4636     0.08  .00  .00  .00  .00  .00  .00 0.75  .00  .00  .00  AIR
4637      .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
4638      .00 0.25  .00 0.25  .00 0.33  .00  .00  .00 1.00  .00  NCK
4639      .00  .00 0.25  .00 0.25  .00 0.33  .00  .00  .00 1.00  TNK
4640     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4641      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4642      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4643      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4644      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4645      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4646      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4647      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4648      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4649      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4650      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4651    4
4652    **
4653    ** 2% AUDIT : INSPECT CATALYST & FUEL INLET ONLY
4654    **                (NON-I/M AREAS ONLY)
4655    **
4656     1.00 1.00 1.00 1.00                                          EVAP/PCV
4657     0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4658      .00 0.99  .00 0.04  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4659      .00  .00 1.00  .00 0.07  .00  .00  .00  .00  .00  .00  AIR/TNK
4660      .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4661      .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4662      .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
4663      .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
4664     0.07 0.01  .00 0.03  .00  .00  .00 1.00  .00  .00  .00  AIR
4665      .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
4666      .00  .00  .00  .00  .00 0.04  .00  .00  .00 0.99  .00  NCK
4667      .00  .00  .00  .00  .00  .00 0.07  .00  .00  .00 1.00  TNK
4668     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4669      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4670      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4671      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4672      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4673      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4674      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4675      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4676      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4677      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4678      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4679     0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
4680      .00 0.89  .00 0.22  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4681      .00  .00 1.00  .00 0.33  .00  .00  .00  .00  .00  .00  AIR/TNK
4682      .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4683      .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4684      .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
4685      .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
4686     0.33 0.11  .00 0.11  .00  .00  .00 1.00  .00  .00  .00  AIR
4687      .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
4688      .00  .00  .00  .00  .00 0.22  .00  .00  .00 0.89  .00  NCK
4689      .00  .00  .00  .00  .00  .00 0.33  .00  .00  .00 1.00  TNK
4690     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4691      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4692      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4693      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4694      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4695      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4696      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4697      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4698      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4699      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4700      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4701    4
4702    **
4703    ** 2% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
4704    **                (NON-I/M AREAS ONLY)
4705    **
4706     1.00 1.00 1.00 1.00                                          EVAP/PCV
4707     0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4708      .00 0.95  .00 0.02  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4709      .00  .00 0.95  .00 0.02  .00  .00  .00  .00  .00  .00  AIR/TNK
4710      .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4711      .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4712      .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
4713      .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
4714     0.02  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00  AIR
4715      .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
4716      .00 0.04  .00 0.04  .00 0.04  .00  .00  .00 0.99  .00  NCK
4717      .00  .00 0.05  .00 0.05  .00 0.07  .00  .00  .00 1.00  TNK
4718     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4719      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4720      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4721      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4722      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4723      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4724      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4725      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4726      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4727      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4728      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4729     0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4730      .00 0.75  .00 0.08  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4731      .00  .00 0.75  .00 0.08  .00  .00  .00  .00  .00  .00  AIR/TNK
4732      .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4733      .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4734      .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
4735      .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
4736     0.08  .00  .00  .00  .00  .00  .00 0.75  .00  .00  .00  AIR
4737      .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
4738      .00 0.14  .00 0.14  .00 0.22  .00  .00  .00 0.89  .00  NCK
4739      .00  .00 0.25  .00 0.25  .00 0.33  .00  .00  .00 1.00  TNK
4740     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4741      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4742      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4743      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4744      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4745      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4746      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4747      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4748      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4749      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4750      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4751    4
4752    **
4753    **
4754    ** 2% AUDIT : INSPECT CATALYST  & FUEL INLET (AND PLUMBTESMO)
4755    **
4756     1.00 1.00 1.00 1.00                                          EVAP/PCV
4757     0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4758      .00 0.94  .00 0.01  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4759      .00  .00 0.94  .00 0.01  .00  .00  .00  .00  .00  .00  AIR/TNK
4760      .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4761      .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4762      .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
4763      .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
4764     0.07 0.06 0.06 0.06 0.06  .00  .00 1.00  .00  .00  .00  AIR
4765      .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
4766      .00  .00  .00  .00  .00 0.01  .00  .00  .00 0.94  .00  NCK
4767      .00  .00  .00  .00  .00  .00 0.01  .00  .00  .00 0.94  TNK
4768     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4769      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4770      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4771      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4772      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4773      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4774      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4775      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4776      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4777      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4778      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4779     0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
4780      .00 0.70  .00 0.03  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4781      .00  .00 0.70  .00 0.03  .00  .00  .00  .00  .00  .00  AIR/TNK
4782      .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4783      .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4784      .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
4785      .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
4786     0.33 0.30 0.30 0.30 0.30  .00  .00 1.00  .00  .00  .00  AIR
4787      .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
4788      .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.70  .00  NCK
4789      .00  .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.70  TNK
4790     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4791      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4792      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4793      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4794      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4795      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4796      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4797      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4798      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4799      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4800      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4801    4
4802    **
4803    **
4804    ** 2% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET (AND PLUMBTESMO)
4805    **
4806     1.00 1.00 1.00 1.00                                          EVAP/PCV
4807     0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
4808      .00 0.94  .00 0.01  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4809      .00  .00 0.94  .00 0.01  .00  .00  .00  .00  .00  .00  AIR/TNK
4810      .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4811      .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4812      .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
4813      .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
4814     0.02 0.01 0.01 0.01 0.01  .00  .00 0.95  .00  .00  .00  AIR
4815      .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
4816      .00  .00  .00  .00  .00 0.01  .00  .00  .00 0.94  .00  NCK
4817      .00  .00  .00  .00 0.93  .00 0.01  .00  .00  .00 0.94  TNK
4818     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
4819      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4820      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4821      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4822      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4823      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4824      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4825      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4826      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4827      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4828      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4829     0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
4830      .00 0.70  .00 0.03  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4831      .00  .00 0.70  .00 0.03  .00  .00  .00  .00  .00  .00  AIR/TNK
4832      .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4833      .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4834      .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
4835      .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
4836     0.08 0.05 0.05 0.05 0.05  .00  .00 0.75  .00  .00  .00  AIR
4837      .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
4838      .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.70  .00  NCK
4839      .00  .00  .00  .00  .00  .00 0.03  .00  .00  .00 0.70  TNK
4840     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
4841      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4842      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4843      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4844      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4845      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4846      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4847      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4848      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4849      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4850      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4851    4
4852    **
4853    ** 2% AUDIT : INSPECT CATALYST & FUEL INLET ONLY
4854    **                (I/M AREAS ONLY)
4855    **
4856     1.00 1.00 1.00 1.00                                          EVAP/PCV
4857     0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4858      .00 0.97  .00 0.02  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4859      .00  .00 1.00  .00 0.07  .00  .00  .00  .00  .00  .00  AIR/TNK
4860      .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4861      .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4862      .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
4863      .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
4864     0.07 0.03  .00 0.05  .00  .00  .00 1.00  .00  .00  .00  AIR
4865      .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
4866      .00  .00  .00  .00  .00 0.02  .00  .00  .00 0.97  .00  NCK
4867      .00  .00  .00  .00  .00  .00 0.07  .00  .00  .00 1.00  TNK
4868     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4869      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4870      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4871      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4872      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4873      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4874      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4875      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4876      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4877      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4878      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4879     0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
4880      .00 0.75  .00 0.08  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4881      .00  .00 1.00  .00 0.33  .00  .00  .00  .00  .00  .00  AIR/TNK
4882      .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4883      .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4884      .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
4885      .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
4886     0.33 0.25  .00 0.25  .00  .00  .00 1.00  .00  .00  .00  AIR
4887      .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
4888      .00  .00  .00  .00  .00 0.08  .00  .00  .00 0.75  .00  NCK
4889      .00  .00  .00  .00  .00  .00 0.33  .00  .00  .00 1.00  TNK
4890     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4891      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4892      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4893      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4894      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4895      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4896      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4897      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4898      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4899      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4900      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4901    4
4902    **
4903    ** 2% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
4904    **                (I/M AREAS ONLY)
4905    **
4906     1.00 1.00 1.00 1.00                                          EVAP/PCV
4907     0.93  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4908      .00 0.95  .00 0.02  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4909      .00  .00 0.95  .00 0.02  .00  .00  .00  .00  .00  .00  AIR/TNK
4910      .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4911      .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4912      .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  .00  CAT/NCK
4913      .00  .00  .00  .00  .00  .00 0.93  .00  .00  .00  .00  CAT/TNK
4914     0.02  .00  .00  .00  .00  .00  .00 0.95  .00  .00  .00  AIR
4915      .00  .00  .00  .00  .00  .00  .00  .00 0.93  .00  .00  CAT
4916      .00 0.02  .00  .00  .00 0.02  .00  .00  .00 0.97  .00  NCK
4917      .00  .00 0.05  .00 0.05  .00 0.07  .00  .00  .00 1.00  TNK
4918     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4919      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4920      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4921      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4922      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4923      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4924      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4925      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4926      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4927      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4928      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4929     0.67  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4930      .00 0.75  .00 0.08  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4931      .00  .00 0.75  .00 0.08  .00  .00  .00  .00  .00  .00  AIR/TNK
4932      .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4933      .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4934      .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  .00  CAT/NCK
4935      .00  .00  .00  .00  .00  .00 0.67  .00  .00  .00  .00  CAT/TNK
4936     0.08  .00  .00  .00  .00  .00  .00 0.75  .00  .00  .00  AIR
4937      .00  .00  .00  .00  .00  .00  .00  .00 0.67  .00  .00  CAT
4938      .00  .00  .00  .00  .00 0.08  .00  .00  .00 0.75  .00  NCK
4939      .00  .00 0.25  .00 0.25  .00 0.33  .00  .00  .00 1.00  TNK
4940     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4941      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4942      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4943      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4944      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4945      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4946      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4947      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4948      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4949      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4950      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4951    4
4952    **
4953    **
4954    ** 5% AUDIT : INSPECT AIR PUMP ONLY
4955    **
4956     1.00 1.00 1.00 1.00                                          EVAP/PCV
4957     0.87  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
4958      .00 0.87  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4959      .00  .00 0.87  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
4960      .00  .00  .00 0.87  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4961      .00  .00  .00  .00 0.87  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4962      .00  .00  .00 0.13  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4963      .00  .00  .00  .00 0.13  .00 1.00  .00  .00  .00  .00  CAT/TNK
4964      .00  .00  .00  .00  .00  .00  .00 0.87  .00  .00  .00  AIR
4965     0.13  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4966      .00 0.13  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4967      .00  .00 0.13  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4968     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
4969      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4970      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4971      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4972      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4973      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4974      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4975      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4976      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4977      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4978      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4979     0.65  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
4980      .00 0.65  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
4981      .00  .00 0.65  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
4982      .00  .00  .00 0.65  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
4983      .00  .00  .00  .00 0.65  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
4984      .00  .00  .00 0.35  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4985      .00  .00  .00  .00 0.35  .00 1.00  .00  .00  .00  .00  CAT/TNK
4986      .00  .00  .00  .00  .00  .00  .00 0.65  .00  .00  .00  AIR
4987     0.35  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4988      .00 0.35  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
4989      .00  .00 0.35  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
4990     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
4991      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
4992      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
4993      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
4994      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
4995      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
4996      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
4997      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
4998      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
4999      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5000      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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5001     4
5002     **
5003     **
5004     ** 5% AUDIT : INSPECT CATALYST ONLY
5005     **
5006      1.00 1.00 1.00 1.00                                          EVAP/PCV
5007      0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
5008       .00 1.00  .00 0.18  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5009       .00  .00 1.00  .00 0.18  .00  .00  .00  .00  .00  .00  AIR/TNK
5010       .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5011       .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5012       .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
5013       .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
5014      0.18  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
5015       .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
5016       .00  .00  .00  .00  .00 0.18  .00  .00  .00 1.00  .00  NCK
5017       .00  .00  .00  .00  .00  .00 0.18  .00  .00  .00 1.00  TNK
5018      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
5019       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5020       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5021       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5022       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5023       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5024       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5025       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5026       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5027       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5028       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
5029      0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
5030       .00 1.00  .00 0.48  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5031       .00  .00 1.00  .00 0.48  .00  .00  .00  .00  .00  .00  AIR/TNK
5032       .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5033       .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5034       .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
5035       .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
5036      0.48  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
5037       .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
5038       .00  .00  .00  .00  .00 0.48  .00  .00  .00 1.00  .00  NCK
5039       .00  .00  .00  .00  .00  .00 0.48  .00  .00  .00 1.00  TNK
5040      1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
5041       .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5042       .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5043       .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5044       .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5045       .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5046       .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5047       .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5048       .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5049       .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5050       .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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5051    4
5052    **
5053    **
5054    ** 5% AUDIT : INSPECT AIR PUMP & CATALYST ONLY
5055    **
5056     1.00 1.00 1.00 1.00                                          EVAP/PCV
5057     0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
5058      .00 0.87  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5059      .00  .00 0.87  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/TNK
5060      .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5061      .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5062      .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
5063      .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
5064     0.05  .00  .00  .00  .00  .00  .00 0.87  .00  .00  .00  AIR
5065      .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
5066      .00 0.13  .00 0.13  .00 0.18  .00  .00  .00 1.00  .00  NCK
5067      .00  .00 0.13  .00 0.13  .00 0.18  .00  .00  .00 1.00  TNK
5068     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
5069      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5070      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5071      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5072      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5073      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5074      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5075      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5076      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5077      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5078      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
5079     0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
5080      .00 0.65  .00 0.13  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5081      .00  .00 0.65  .00 0.13  .00  .00  .00  .00  .00  .00  AIR/TNK
5082      .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5083      .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5084      .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
5085      .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
5086     0.13  .00  .00  .00  .00  .00  .00 0.65  .00  .00  .00  AIR
5087      .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
5088      .00 0.35  .00 0.35  .00 0.48  .00  .00  .00 1.00  .00  NCK
5089      .00  .00 0.35  .00 0.35  .00 0.48  .00  .00  .00 1.00  TNK
5090     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
5091      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5092      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5093      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5094      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5095      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5096      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5097      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5098      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5099      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5100      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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5101    4
5102    **
5103    ** 5% AUDIT : INSPECT CATALYST & FUEL INLET ONLY
5104    **                (NON-I/M AREAS ONLY)
5105    **
5106     1.00 1.00 1.00 1.00                                          EVAP/PCV
5107     0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
5108      .00 0.97  .00 0.12  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5109      .00  .00 1.00  .00 0.18  .00  .00  .00  .00  .00  .00  AIR/TNK
5110      .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5111      .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5112      .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
5113      .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
5114     0.18 0.03  .00 0.06  .00  .00  .00 1.00  .00  .00  .00  AIR
5115      .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
5116      .00  .00  .00  .00  .00 0.12  .00  .00  .00 0.97  .00  NCK
5117      .00  .00  .00  .00  .00  .00 0.18  .00  .00  .00 1.00  TNK
5118     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
5119      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5120      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5121      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5122      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5123      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5124      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5125      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5126      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5127      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5128      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
5129     0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
5130      .00 0.85  .00 0.33  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5131      .00  .00 1.00  .00 0.48  .00  .00  .00  .00  .00  .00  AIR/TNK
5132      .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5133      .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5134      .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
5135      .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
5136     0.48 0.15  .00 0.15  .00  .00  .00 1.00  .00  .00  .00  AIR
5137      .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
5138      .00  .00  .00  .00  .00 0.33  .00  .00  .00 0.85  .00  NCK
5139      .00  .00  .00  .00  .00  .00 0.48  .00  .00  .00 1.00  TNK
5140     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
5141      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5142      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5143      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5144      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5145      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5146      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5147      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5148      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5149      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5150      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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5151    4
5152    **
5153    ** 5% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
5154    **                 (NON-I/M AREAS ONLY)
5155    **
5156     1.00 1.00 1.00 1.00                                          EVAP/PCV
5157     0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
5158      .00 0.87  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5159      .00  .00 0.87  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/TNK
5160      .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5161      .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5162      .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
5163      .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
5164     0.05  .00  .00  .00  .00  .00  .00 0.87  .00  .00  .00  AIR
5165      .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
5166      .00 0.10  .00 0.10  .00 0.12  .00  .00  .00 0.97  .00  NCK
5167      .00  .00 0.13  .00 0.13  .00 0.18  .00  .00  .00 1.00  TNK
5168     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
5169      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5170      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5171      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5172      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5173      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5174      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5175      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5176      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5177      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5178      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
5179     0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
5180      .00 0.33  .00 0.13  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5181      .00  .00 0.33  .00 0.13  .00  .00  .00  .00  .00  .00  AIR/TNK
5182      .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5183      .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5184      .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
5185      .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
5186     0.13  .00  .00  .00  .00  .00  .00 0.33  .00  .00  .00  AIR
5187      .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
5188      .00 0.20  .00 0.20  .00 0.33  .00  .00  .00 0.85  .00  NCK
5189      .00  .00 0.35  .00 0.35  .00 0.48  .00  .00  .00 1.00  TNK
5190     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
5191      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5192      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5193      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5194      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5195      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5196      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5197      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5198      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5199      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5200      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
**
** 5% AUDIT : INSPECT CATALYST  & FUEL INLET (AND PLUMBTESMO)
**
 1.00 1.00 1.00 1.00                                          EVAP/PCV
 0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.86  .00 0.04  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.86  .00 0.04  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
 0.18 0.14 0.14 0.14 0.14  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
  .00  .00  .00  .00  .00 0.04  .00  .00  .00 0.86  .00  NCK
  .00  .00  .00  .00  .00  .00 0.04  .00  .00  .00 0.86  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.57  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.57  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
 0.48 0.43 0.43 0.43 0.43  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
  .00  .00  .00  .00  .00 0.05  .00  .00  .00 0.57  .00  NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00 0.57  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
**
** 5% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET (AND PLUMBTESMO)
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
  .00 0.86  .00 0.04  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.86  .00 0.04  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
 0.05 0.01 0.01 0.01 0.01  .00  .00 0.87  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
  .00  .00  .00  .00  .00 0.04  .00  .00  .00 0.86  .00  NCK
  .00  .00  .00  .00 0.82  .00 0.04  .00  .00  .00 0.86  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
  .00 0.57  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 0.57  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
 0.13 0.08 0.08 0.08 0.08  .00  .00 0.65  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
  .00  .00  .00  .00  .00 0.05  .00  .00  .00 0.57  .00  NCK
  .00  .00  .00  .00  .00  .00 0.05  .00  .00  .00 0.57  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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5301    4
5302    **
5303    ** 5% AUDIT : INSPECT CATALYST & FUEL INLET ONLY
5304    **                (I/M AREAS ONLY)
5305    **
5306     1.00 1.00 1.00 1.00                                          EVAP/PCV
5307     0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (PREVIOUS)
5308      .00 0.94  .00 0.07  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5309      .00  .00 1.00  .00 0.18  .00  .00  .00  .00  .00  .00  AIR/TNK
5310      .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5311      .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5312      .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
5313      .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
5314     0.18 0.06  .00 0.11  .00  .00  .00 1.00  .00  .00  .00  AIR
5315      .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
5316      .00  .00  .00  .00  .00 0.07  .00  .00  .00 0.94  .00  NCK
5317      .00  .00  .00  .00  .00  .00 0.18  .00  .00  .00 1.00  TNK
5318     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (PREVIOUS)
5319      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5320      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5321      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5322      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5323      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5324      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5325      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5326      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5327      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5328      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
5329     0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT  (SUBSEQUENT)
5330      .00 0.65  .00 0.13  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5331      .00  .00 1.00  .00 0.48  .00  .00  .00  .00  .00  .00  AIR/TNK
5332      .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5333      .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5334      .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
5335      .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
5336     0.48 0.35  .00 0.35  .00  .00  .00 1.00  .00  .00  .00  AIR
5337      .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
5338      .00  .00  .00  .00  .00 0.13  .00  .00  .00 0.65  .00  NCK
5339      .00  .00  .00  .00  .00  .00 0.48  .00  .00  .00 1.00  TNK
5340     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT  (SUBSEQUENT)
5341      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5342      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5343      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5344      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5345      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5346      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5347      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5348      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5349      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5350      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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5351    4
5352    **
5353    ** 5% AUDIT : INSPECT AIR PUMP, CATALYST & FUEL INLET ONLY
5354    **                (I/M AREAS ONLY)
5355    **
5356     1.00 1.00 1.00 1.00                                          EVAP/PCV
5357     0.82  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
5358      .00 0.87  .00 0.05  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5359      .00  .00 0.87  .00 0.05  .00  .00  .00  .00  .00  .00  AIR/TNK
5360      .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5361      .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5362      .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  .00  CAT/NCK
5363      .00  .00  .00  .00  .00  .00 0.82  .00  .00  .00  .00  CAT/TNK
5364     0.05  .00  .00  .00  .00  .00  .00 0.87  .00  .00  .00  AIR
5365      .00  .00  .00  .00  .00  .00  .00  .00 0.82  .00  .00  CAT
5366      .00 0.07  .00 0.02  .00 0.07  .00  .00  .00 0.94  .00  NCK
5367      .00  .00 0.13  .00 0.13  .00 0.18  .00  .00  .00 1.00  TNK
5368     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
5369      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5370      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5371      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5372      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5373      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5374      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5375      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5376      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5377      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5378      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
5379     0.52  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
5380      .00 0.65  .00 0.13  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
5381      .00  .00 0.65  .00 0.13  .00  .00  .00  .00  .00  .00  AIR/TNK
5382      .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
5383      .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
5384      .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  .00  CAT/NCK
5385      .00  .00  .00  .00  .00  .00 0.52  .00  .00  .00  .00  CAT/TNK
5386     0.13  .00  .00  .00  .00  .00  .00 0.65  .00  .00  .00  AIR
5387      .00  .00  .00  .00  .00  .00  .00  .00 0.52  .00  .00  CAT
5388      .00  .00  .00  .00  .00 0.13  .00  .00  .00 0.65  .00  NCK
5389      .00  .00 0.35  .00 0.35  .00 0.48  .00  .00  .00 1.00  TNK
5390     1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
5391      .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
5392      .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
5393      .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
5394      .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
5395      .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
5396      .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
5397      .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
5398      .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
5399      .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
5400      .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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4
**
**
**  NO PROGRAM (UNITY MATRIX)
**
 1.00 1.00 1.00 1.00                                                EVAP/PCV
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (PREVIOUS)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  AIR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  AIR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  AIR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  AIR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT   (SUBSEQUENT)
  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/NCK
  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  .00  EGR/TNK
  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  .00  EGR/CAT/NCK
  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  .00  EGR/CAT/TNK
  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  .00  CAT/NCK
  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  .00  CAT/TNK
  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  .00  EGR
  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  .00  CAT
  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  .00  NCK
  .00  .00  .00  .00  .00  .00  .00  .00  .00  .00 1.00  TNK
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